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PHYSIOLOGY.

LECTURES

ON THE

PHYSICAL CONDITIONS

OF THE

TISSUES OF THE HUMAN BODY

AS APPLIED TO THE EXPLANATION OF

VITAL PHENOMENA.

Delivered at the College of France in 1834.

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LECTURE XXIII.

Admission of Air into the Veins.—Resumé.—The Respiration Caverneuse; Crepitation of the Lungs; the Rale Crepitant Sec; Frottement from the Motions of the Lung.—The Metallic Tinkling; Attempts to produce it in the Dead Body.—Artificial production of a Pneumonia or Pulmonary Œdema.—The Resonance of the Voice in the Chest.—Pectoriloquy and Œgophony.

BEFORE we take a retrospective view, as has been our custom, of the points touched upon in the last lecture, let us endeavour to complete the subject of emphysema.

In addition to that form of the disease which results from forcible distention of the air-cells during some muscular efforts, we have another form of pulmonary emphysema, depending on the introduction of a considerable quantity of air into the venous system. This fact has been frequently determined by experiment on several animals, especially old horses, who, as is well known, are often suddenly killed by the introduction of some atmospheric air into a vein which has been opened; sometimes death is produced by interruption of the circulation through the lungs: but here the fatal result depends entirely on the sudden production of pulmonary emphysema.

The same phenomena is occasionally witnessed during the course of operations performed on the human subject; indeed we had an unfortunate example of it not very long ago at the *Hotel Dieu*, while M. DUPUYTREN was removing a large tumour from a woman's neck: one of the assistants present incautiously moved the edges of the wound, the patient cried out as if struck by some sharp pain, and died in a minute or two. The cause of the unexpected result was carefully investigated, and it was found that the accidental entrance of some air into one of the jugular veins had produced emphysema of the lungs, and consequent death. The case to which I have just alluded, happening as it did under the hands of one of our best and most enlightened surgeons, ought to make you peculiarly cautious when you have to operate upon any parts in the vicinity of large veins, more particularly about the region of the neck. Let every one, assistants as well as surgeon, guard against the entrance of any quantity of air during inspiration. This may be done, in the first place, by not wounding, unless it is absolutely inevitable, any of the principal venous trunks; but even should this accidentally take place, the entry of air may in a great measure be prevented by avoiding any disturbance of the parts, by taking care above all things not to lift up the vein, and thus prevent the collapse of its parietes during the act of inspiration. If you are not sufficiently attentive to this last point, the atmospheric air will probably find entrance through the vein to the heart and lungs, and produce sudden death.

Here is a dog on which we propose to try an experiment illustrative of what has just been said; a pipe has been fixed in the jugular vein, and we now introduce some air by means of this syringe; the first quantity does not seem to have produced much effect; his respiration is a little quicker and shorter; let us try ano-

ther syringeful; you have now seen the effects; in a few seconds after the introduction of the second syringe of air the animal began to cry as if suffering from some severe pain; he then made a few violent efforts, fell down, and died, evidently labouring under some impediment to the free entrance of air into the lungs. Let us open the cavity of the chest, and examine the state of the pulmonary tissue; just before death we distinguish the *craquement* so characteristic of pulmonary emphysema; here is the lung, and you may observe how the air passes from one cell to another; the whole of the tissue is, in short, emphysematous.

We have now passed in review several physical phenomena which present themselves in the respiratory organs during disease, and we saw how perfectly they corresponded with certain changes in the structure or disposition of the lung; thus, when a portion of the pulmonary tissue has been excavated and destroyed by the formation of a large cavity, the passage of air from a narrow tube into the cavity, whether the latter be empty or filled with a viscid fluid, cannot evidently produce the same physical effects as when the air is gradually introduced into a number of small elastic vesicles; in the one case you find the soft prolonged sound of the respiratory murmur; in the former the air rushes through a narrow conduit into an excavation, which it suddenly fills, and thus gives rise to what has been called the respiration caverneuse, or souffle tubaire, a loud strong bruit, as if some one was actually blowing into your ear. In many cases of phthisis this souffle is very strongly marked, and more particularly distinguished during the act of expiration; here the sound depends on the passage of air from the cavity through the elastic tubes that open into it; the air rushes with considerable quickness from a large space into one or two conduits of narrow diameter, and develops in its transit the bruit of which we speak.

Another phenomenon submitted to our examination was crepitation, existing during life, or in some cases persisting even after death. We mentioned to you how this property was very generally considered by authors as a sign of health; but we endeavoured to show, on the contrary, that crepitation, so far from being the character of a perfectly healthy lung, is the consequence of an abnormal condition of the pulmonary vesicles. When the lungs enjoy the full exercise of their peculiar function, and are healthy in structure, the pulmonery tissue returns upon itself, in virtue of its elasticity, expels the whole of the air contained in the minute branches of the bronchial tubes, and no crepitation is observed after death; indeed the phenomenon can only exist when air passes with some freedom from one air cell to another, and, of consequence, when the tissue of the lung has undergone an important modification. If you deprive an animal suddenly of life by some poison, or by other means which do not cause any violent muscular effort, you will not find any crepitation in the lung, although that organ may be in a state of the most perfect integrity. When death occurs as the consequence of the wound, which has opened some large bloodvessel, &c., you do not observe that the lungs are crepitant. Why? the individual has died quietly and suddenly; there has been no obstacle to the complete expulsion of air from the chest; the elasticity of the lungs has been sufficient to empty the vesicles; there is no air contained in the tissue of the lung, and the organ would be erroneously considered as unhealthy, if we were guided by the opinion held by most physiologists of the present day. However, we may often find crepitation where the tissue of the lung is so slightly altered as to escape any thing short of the most minute examination; thus the efforts made by the individual before death, without having ruptured any of the air-cells, may yet have destroyed their elasticity in some slight degree, and thus have given rise to crepitation from the impossibility of completely emptying the terminal tubes and vesicles of the air contained in them. The whole of this question deserves a thorough examination, for we not only fall into a grave error as pathologists, in describing crepitation as a sign of a healthy lung, but also adopt a principle that is not without inconveniences in practice.

Crepitation, then, exists in the human lung after death, and is, as we have said, in all cases a sign of more or less alteration in the structure of the organ; but we also observe the same phenomenon during life in the course of several diseases, which differ considerably in their nature and symptoms. In some cases the patient exhibits merely a derangement of the function of respiration, which is more or less troubled. The physical cause resides in a distention of the air-cells, several of which are dilated to two or three times their natural diameter; in consequence of this irregular disposition, the air is not perfectly expelled from the tissue of the lung, and the craquement, or râle crepitant sec à grosses bulles, is produced at each inspiration. The altered capacity of the vesicles, and the circumstance of their always containing some quantity of air, are the two conditions which give rise to

the development of this bruit, and, in fact, it expresses well the entrance of the air into a set of vesicles unequally dilated, and whose parietes are unnaturally dry. However, it would appear that the râle crepitant sec may occur under different modifications, for it is often observed in other affections of the respiratory system, especially those known under the rather vague and comprehensive name of asthma.

There was another phenomenon of which we spoke in our last lecture, which it may be well again to call your attention to, viz.: the frottement arising in the cavity of the chest from the relative change of position between the lungs and the parietes of the thorax, and the peculiar sound occasionally produced by the rubbing of those two bodies against each other. You have seen how the totality of the lung changes its relations with the anterior and lateral walls of the thorax at each act of inspiration; the lung ascends and descends with the same regularity as the diaphragm; during inspiration the anterior surface of the lung glides upwards for some way against the posterior surface of the thorax, and during expiration it sinks to its natural level; you are not to imagine with some physiologists that the lung, placed in close contact with the parietes of the thorax, follows exactly its motions of expansion and contraction; the lung always remains in contact with the thorax; this is certain; but in addition to its forward and backward motion it has another one, of ascent and descent: hence any one given portion of the lung is constantly rubbing against a portion of the pleura lining the walls of the chest: during health, when both surfaces are perfectly smooth and lubricated by a soft fluid, calculated to diminish the effects of friction, and thus render the passage of one body over the other noiseless; this alternate ascent and descent of the lung are not accompanied by the development of any sound whatever: but in certain forms of pulmonary disease, in emphysema for example, when the slightest bruit is heard with distinctness, from the exaggerated resonance of the pulmonary tissue, we hear a bruit de frottement, a kind of craquement which is very remarkable, but which requires a fine and practised ear to distinguish it from the true vesicular craquement; however, the latter does not occur in expiration, as it depends upon the sudden entrance of air into a dilated sac, and this may serve to separate the two bruits, otherwise very similar in their nature.

You have also seen how emphysema of the lung may be produced by the introduction of air into the venous system: at first sight this may seem a strange fact, but the explanation is not difficult; the air finds its way from the large venous trunks to the right side of the heart, and thence passes with the blood through the branches of the pulmonary artery to the lung, where it produces the stethoscopic phenomena of emphysema. This form of the disease is, as you may well imagine, quite different from common emphysema, where the air passes from one vesicle to another, but the physical signs are the same: however, the concomitant circumstances are generally sufficient in most cases to betray the nature of the disease, which, besides, is followed by rapid death.

These were the principal points touched upon in our last lecture; I regret that our time prevents us from entering more fully upon this interesting and important subject.

The "tintement metallique" of LAENNEC is a symptom well known to those conversant with diseases of the chest: it is unnecessary to give you a description of this peculiar sound, which has been compared to that arising from the shock of the head of a pin against a metal basin, or to the tinkling bruit produced by letting a grain of sand fall to the bottom of the same vessel. The cases in which this bruit is heard are twofold, viz., when the cavity of the chest contains some fluid mixed with air; and secondly, in cases of tubercular excavation of the lung; but the conditions which accompany its formation are not sufficiently known to enable us to explain it physically, as we have done in the other bruits already noticed. Let us endeavour, nevertheless, to make the most of our present knowledge, by examining, as far as they go, the conditions we know to exist in company with the tintement metallique.

A patient, let us say, after having been afflicted for some days with fever, pain in the side, &c., in a word, with inflammation of the pleura, shows symptoms of effusion into the cavity of the chest; at first the quantity of fluid is very great, but in a few days it may be considerably diminished, reduced even to one half by a process of which we are not without examples; the patient, in addition to his pleurisy, labours under tubercular phthisis: an abscess has formed in the substance of the lung, and opened into the cavity of the thorax: a great portion of the purulent fluid contained in the chest may be discharged through the bronchi, while at the same time the atmospheric air passes from the air-tubes into the chest, and occupies a part of that cavity. This double collection of air and pus gives rise to a complicated affection: in the lower part of the

chest we have empyema; in the upper a fistulous communication of the bronchi with the cavity of the pleura, constituting pneumo-thorax: the disease is easily recognised by the attentive observer; the respiratory sound is no where heard, and on examining the state of the chest by percussion, you find the upper part sonorous, while the inferior portion, occupied by the purulent collection, gives a dull, mat sound. The chest, therefore, resembles a large vase partly filled with fluid, and partly with air; besides, it is necessary to remember how the air communicates with the trachea and external atmosphere by several small openings on the surface of the pulmonary abscess. These, Gentlemen, are the physical conditions, at least as far as we know, that accompany the development of the tintement metallique, though I must confess we cannot say how far they explain its formation.

Even under the circumstances just described, the bruit of which we speak does not always exist: thus, for example, we sometimes hear it during expiration only; sometimes it is observed only during inspiration; on other occasions the tintement metallique exists for some time, and then disappears, to return again at an uncertain period; hence this bruit is not necessarily connected with respiration. The facts I have just stated are very familiar in practice: you apply your ear to the chest of a patient who you suspect labours under pneumo-thorax with effusion. You listen attentively, eager to catch anything that may assist in the diagnosis of the affection, but you hear nothing: after a few seconds, or perhaps minutes, you suddenly hear a little crack, like that of a bit of metal falling from some height against the bottom of a vase; the sound of the tintement metallique is very peculiar. Laennec was in the habit of comparing it with the bruit produced when a drop of some liquid is allowed to fall into a glass jug containing a small quantity of water; but the sound is more sudden and sharp, and is followed by a ringing bruit, like a glass struck with the nail and allowed to vibrate.

The causes which produce the tintement metallique are not by any means well understood: suppositions have been made (they are made and abandoned with surprising facility in medicine), but when we come to examine them, we find nothing but mere theories without any shadow of proof. Laennec took a view altogether physical of this bruit, and explained its formation by the falling of a drop of pus from the upper part of the chest through the air into the liquid contained in the lower portion of the cavity. The explanation put forward by Laennec has been universally received, but it does not seem to me to be a correct one; in fact, if I drop a few drops of liquid into this vase before me, I develop a very insignificant shock indeed, and the sound produced does not bear the least analogy to the metallic resonance of the true tintement; I am therefore inclined to think it is the result of other causes than those assigned by Laennec; besides, how do we know that a drop of liquid sticks to the upper part of the chest, and then drops at a certain time into the fluid below? This may be true, or it may be not true; in short it is a mere supposition, and nothing more,—one of those facts, which have been invented to explain an obscure phenomenon, and for which we have no other guarantee than the word of the author. It is strange that physicians should have left this question so long without having had recourse to experiment, for, in the present instance at least, they might have imitated without difficulty the physical conditions laid down by Laennec as the cause of the tintement metallique, and thus ascertained the correctness or incorrectness of his theory.

The experiment, as I said, may be readily performed upon the dead body; we have made preparations for it here. A quantity of fluid, amounting I think to more than half a pound, has been thrown into the cavity of the chest; its gravity carries it towards the depending parts in the dead body, as well as in the living; so far there is no difference. We next pierced the pulmonary tissue with a trocar, in order to represent a fistulous communication between the pleuræ and bronchi, and then forced a quantity of air through the trachea into the lungs, which, escaping through the artificial opening we had practised, completed the ensemble of circumstances which we were desirous of assembling together. Where there are all the physical conditions of the tintement metallique, a fluid in the lower part of the chest, air in the upper, and a communication between the bronchi and cavity of the chest, we ought to hear the metallic bruit; but when the lungs are inflated, we hear little or nothing worth speaking of. We have also dropped a few drops of fluid from the upper part of the chest by means of a tube introduced above the clavicle, but we did not succeed in producing any sound that bears the slightest resemblance to the tintement metallique.

We have also imagined another experiment, by means of which perhaps we may at length arrive at the explanation of this

phenomenon. Some physicians, not satisfied with LAENNEC's theory, have adopted one depending upon a different principle; they say it is unnecessary to suppose the dropping of a fluid from the upper part of the chest into the collection accumulated below; it is enough to imagine that the air, passing out from the lungs through the fistulous opening in the bronchi, traverses the mass of purulent fluid, and as it emerges on the surface, explodes with a kind of little crack, which produces the sound in question.

This is an ingenious idea, and it is by no means impossible that the things just stated should occur; but still it is nothing more than a supposition; and, as such, can have no value until supported by proof of some kind. I have had recourse, as usual, to experiment, and here is the result of what I have observed. In the subject lying before me, and which has just served for other experiments of an analogous kind, I perforated the lung in such a manner that the opening being below the level of the fluid, the air which escaped into the cavity of the chest must necessarily pass through this latter; I then forced a quantity of air through the trachea into the lungs, part of which naturally escaped through the artificial opening we had made; on applying the stethoscope to the chest, we could hear the bullæ of air, distinctly enough, ascending through the fluid, and producing a kind of craquement at the surface; but nothing was observed which at all resembled the dry, sudden, metallic sound of the true tintement. I repeated this experiment in different ways before lecture, and could not succeed in producing any bruit; however, I shall again repeat it before you, for there is nothing like showing a person the truth of what is asserted. The assistant, as you see, forces a quantity of air into the trachea; part of this must necessarily escape through the wounded lung into the chest; but if you apply your ear, or the instrument, in the neighbourhood of the injured point, you do not hear any râle or bruit worth speaking of.

Let us now try whether we shall have more success with the other experiment. I have pricked a small opening here under the clavicle, and will drop a few drops of water into the cavity of the chest, listening attentively at the same time, so that the least noise within cannot escape me. The assistant has, as you have just seen, allowed some drops to escape from the nozzle of a small syringe, but I did not hear anything bearing the most remote resemblance to the tintement; indeed, the shock which the small drop makes in falling can scarcely be distinguished. Perhaps the cracking of bullæ of air as they ascend through a liquid, and the vibration of a column of gas in contact with the fluid, give the most probable explanation, but, I repeat, this is a mere supposition, and not supported by any experiment or observation; in short, like most of our theories in physiology, it wants a proof.

We shall now proceed to another experiment, the object of which is to show you a very curious phenomenon, viz., pulmonary œdema, and the circumstances under which it is produced. Whenever any cause, whether mechanical or otherwise, impedes the free circulation of blood through the minute branches of the pulmonary vessels, as for example, engouement &c., we have a secretion of frothy matter filling up the trachea, and all the ramifications of the bronchi; it can scarcely be called a malady, because it is an effort of nature to remove the obstacle which exists, and which cannot continue for any length of time without causing grave inconveniences in the economy.

Let us now produce this state in the living animal, and see with what physical signs it is accompanied. I have injected an ounce of oil into the blood of the dog before me; olive oil is, as you know, a mild and innocent fluid; an ounce has been thrown into the jugular vein, whence the oil has passed to the heart, and, finally, through the pulmonary artery to the capillaries of the lungs: there the fluid, composed of a mixture of oil and blood, being incapable of the minute subdivision necessary for its free passage through the small vessels, has in some respect blocked them up; the contents of the artery do not pass freely into the radicles of the pulmonary veins, and the consequence has been the development of an oily pneumonia: pardon me the expression, but though strange it is a correct one; for what is pneumonia but an obstacle to the passage of the blood through the pulmonary capillaries? There may be something superadded in the inflammation, but the obstacle to the circulation is the essential part of the disease.

Here, then, we have given rise to a peculiar kind of inflammation, a pneumonia caused by the congestion of blood and oil, and terminating, like other inflammations, in the effusion, or, more properly speaking, the exhalation of serum and oil, mingled together, into the minor subdivisions of the bronchi, and even the trachea; the effusion is merely the effect of obliteration of the vessels; it occurs whenever the circulation through them is impeded, and should not, as I have said, draw away your attention from the true and radical cause of the

disease. Now if we wish to form an idea of the bruit developed under the physical circumstances just enumerated, we have only to apply the stethoscope to the chest of this dog, and listen to what takes place in his lung, for as we have succeeded in producing the physical condition, we must, consequently, have the physical result.

In the living subject we have very frequent examples of an obstacle to the circulation of blood through the capillary vessels of the lung; it is unnecessary to remind you how frequent a disease pneumonia is; how the bloodvessels, applied to the parietes of the pulmonary vesicles, are here in a state of perfect engorgement; how the vesicles themselves are more or less filled with a mixture of blood and thick mucus. Under these conditions the air cannot pass freely through the small bronchi to the vesicles, and the bruit called "râle crepitant," or crepitation, is produced; in simple engouement of the lung, where the blood merely stagnates in the vessels, without throwing off any of its component parts into the vesicles, we find nothing but an absence of the respiratory murmur without the circumstance of crepitation, because the air in this slight form of pulmonary disease is only prevented from entering the cells, and, where it does penetrate, does not encounter the deposite of fluid, &c., which characterizes pneumonia and its bruit.

We have produced as nearly as possible the physical conditions of pneumonia in the lung of the animal before us; we have caused an impeded circulation in the capillaries, and an effusion of viscid fluid into the vesicles; let us now see what the stethoscopic phenomena may be. When the lungs are dilated, the œdematous structure gives a distinct craquement; it is something more soft than a well-marked râle crepitant, but sufficiently clear to show the nature of the affection which causes it. I would advise you to examine the animal after lecture, for it is difficult to produce a better idea of incipient pneumonia and the bruit by which it is accompanied.

Here is another experiment, which we performed before the lecture; a pound of water was thrown into the circulation of this little dog, but his lung appears perfectly sound, and does not give any crepitation; as you see, the organ has returned to its original and natural size, having expelled all the air contained in it; the bruit will in all probability be normal; I now inflate the lung and do not hear any crepitation; the latter sound then is manifestly modified by the nature of the effusion.

The sounds of which we have hitherto spoken are all connected more or less with the act of respiration, and depend upon certain conditions of the air-cells, bronchi, or trachea artery, but we have yet to speak of the phenomena accompanying the resonance of the voice in the chest; these are quite distinct from the former; they are not respiratory but vocal bruits, and depend, as I said before, on the voice formed in the larynx being conducted along the trachea to the chest, and there resounding at a particular point. If you examine the larynx of a healthy individual while speaking, and place the stethoscope over that organ, you will have an immense resonance of the voice from the manner in which the tube magnifies the vibrations of the elastic parietes: if you place the stethoscope over any point of the trachea, you also observe a very well-marked resonance: it seems as if the person were speaking loudly with his mouth close to your ear: finally, if you auscult the chest of a healthy person while he speaks, you find the resonance of the voice, but it is far from being so strong in this part of the apparatus; a great portion of the sound is lost: however, if the chest of the individual happen to be large, if his voice be naturally grave and his person thin, you hear the voice resounding with a good deal of intensity when you apply the ear behind the chest, between the scapula and spinal column, in the neighbourhood of the root of the lungs. This is what we observe when auscultating the voice in a healthy person; and as the phenomena depend principally upon physical conditions which we have already exposed at an early period of the course, I thought perhaps they might be reproduced by inserting an anche in the trachea of the dead subject; at least I expected we should have a resonance of the sounds artificially formed at the upper part of the tube. I shall now try the experiment before you, though I am not very sanguine as to its success: the anche has been fitted as you see to the top of the trachea, and I now blow through it; but I do not develop any sound that gives a resonance in the chest. It is a matter that we must defer to a future time.

As the respiratory sound is modified, or even extinguished, by various lesions of the lung, so there are many conditions of the organ that modify in a very remarkable manner the resonance of the voice. Thus, for example, when the pulmonary tissue is hollowed by a large excavation, as often occurs in cases of phthisis, whenever the patient speaks there is a remarkable resonance of the voice in that part of the chest corresponding with the cavity. It seems as though he actually spoke from

that point, and hence LAENNEC gave this phenomenon the name of pectoriloquy. The explanation of its production in a physical point of view is easily given. You have a large cavity filled with air; the parietes of the excavation are formed by a compact elastic tissue; while the patient speaks, the air contained in the cavity is agitated by the voice; the vibrations are communicated to its walls, and thence to the exterior through the parietes of the thorax.

We have also the modification of the voice, which is called "ægophony," but this phenomenon is not so easily explained; it occurs under circumstances quite different from pectoriloquy. A patient is attacked by inflammation of the the pleura; after a few days, symptoms of suppuration and effusion show themselves, and on auscultating the chest, you hear that peculiar modification of the voice which is called "ægophonie," or "voix cheorotante," a kind of cry as if a goat were baaing at some distance. Practitioners are well acquainted with the conditions accompanying the phenomenon, which is proved to be a pathognomic sign of pleuritic effusion; but we, who would explain all those symptoms by a combination of physical conditions, say it is not so easy to see how the presence of some pus in the chest should produce ægophony: we are, in fact, here driven to a conjecture, and this is the same thing as if we were to say, "I know nothing at all about the matter." The lung is pushed up near the great bronchial tubes, and we have the pulmonary tissue, elastic and vibrating as it is, changing place at every motion, and thus producing the peculiar sound; but, I repeat, we have no proof whatever of this. The question of ægophony, as well as the tintement metallique, requires further examination; and if its explanation have hitherto escaped us, it is only because sufficient attention has not been paid to the physical conditions attending their development.

CARBONATE OF IRON IN DIFFICULT MENSTRUATION.—There are several forms of difficult menstruation, but one, which has not as yet much attracted the notice of writers, is connected with a true neuralgia of the hypogastric plexus; in one case of this kind, where antiphlogistics, opium, and other narcotics, &c., were in vain tried for several months, Dr. Trois succeeded in obtaining a cure by large doses of the carbonate of iron.—*Venetian Journal.*

CLINICAL MEDICINE.

LECTURES

DELIVERED AT THE

NORTH LONDON HOSPITAL,

BY

A. T. THOMSON, M.D.,

Physician to the Hospital, and Professor of Materia Medica in the University of London.

LECTURE XIII.

EPILEPSY COMPLICATED WITH ASTHMA.

GENTLEMEN,—Since the opening of the hospital, we have seen a few of our patients affected with occasional epilepsy; but none who could be considered as labouring under a regular attack of the disease, until the lad, named Chesterman, was admitted on the 27th of January. This young man is seventeen years of age, but appears much younger—even boyish, and is defective in the development of several parts of the body, more especially the thorax, which is extremely narrow, and is of that form usually denominated pigeon-breasted. He has always been subject to asthma, or, rather, to dyspnœa, which is much augmented on any exertion; he may be said to have habitually bad nights, owing to the asthmatic cough, and, like all asthmatics, he is high-shouldered, thin, and emaciated. There does not appear to be any peculiarity in the form of his head.

The epilepsy is of twelve years' standing, and has periodically displayed itself at the beginning and end of each month, but, lately, it has recurred more frequently. He attributes the origin of the disease to a fright which he suffered when a house, in which he was living, took fire. The fits have latterly recurred very frequently, sometimes twice a day, which he supposed to arise from his having caught cold about a week before his admission, from having been exposed to cold and damp. His usual asthmatic cough has been thus increased, and his expectoration rendered difficult; but he complains of no pain of the chest, even on taking a full inspiration. He suffered from pneumonic inflammation two years ago for nearly nine months, during which time he was frequently bled; but, except an increased degree of dyspnœa, on moving about more than usual, he has felt no inconvenience from that attack. The last epileptic fit, which happened before his admission into the hospital, con-

tinued for three hours and a half; but he has had some which have lasted for twelve hours. The fits in general are accompanied with vomiting; his appetite is usually voracious before the recurrence of each paroxysm; his tongue is always furred; the bowels are costive; the urine is high-coloured, and the skin dry. He entered the hospital on account of a bronchitic attack, under which he is still labouring. On examining the chest by percussion, the resonance on the right side was rather obtuse, but it was sufficiently clear on the left side; auscultation afforded a very slight sibilant rhonchus on inspiration, but no other indication of diseased action in the air-tubes, except the *dry sonorous rhonchus* always present in asthmatic patients during expiration. The cough was very severe at night; the pulse was full, hard, and 118. He complained of pain on the vertex. His tongue and mouth were dry. He was ordered to lose ʒviij of blood, to apply a blister on the thorax, and to take f.ʒij of the following mixture every fourth hour:—

℞ *Antimonii Tart.* gr. j;
Magnesiæ Sulphatis ʒiij;
Aquæ Distillatæ f. ʒvj. M.

28. The bleeding relieved the dyspnœa, and also the pain of the head, which has not returned. He was ordered to continue the mixture.

Feb. 2. His cough was much better, but the dyspnœa was still severe; the pulse was 112 and hard, and the bowels were confined. He had an epileptic fit to-day, and as he previously felt an uneasy sensation at the epigastrium, I was induced to think that it was connected with some disordered condition of the stomach; he was, therefore, ordered, after opening his bowels with a dose of castor oil, to take ʒss of sulphate of zinc as an emetic in the evening, and to repeat it daily.

9. He reported that he had felt altogether better since the use of the emetics, and except the remains of the pain of his chest, his chief complaint was debility. He was desired to discontinue the emetics, and to take ɱxx of the solution of hydriodate of iron (a dose equal to gr. j of the ioduret) three times a day. This medicine, however, was taken for two days only, as it evidently augmented the dyspnœa, and increased the pain under the sternum. On the 11th, therefore, it was discontinued, and he was cupped between the shoulders to the amount of ʒviij.

12. He stated that the cupping had greatly relieved his breathing, but his cough had disturbed him much during the night; his tongue was dry, and his pulse 120, but not hard. He was ordered to recommence the use of his emetics. From this time till the 23rd his breathing and his cough had scarcely disturbed him, but he had had an epileptic fit every day, except on the 19th and 20th; the violence of the paroxysm, however, was much abated; indeed, that which occurred on the 23rd lasted only two minutes. As he had again begun to cough on that day, he was ordered to apply eighteen leeches to the chest, and to discontinue his emetics.

26. His cough was relieved by the leeches, but the epileptic paroxysms had increased in frequency, and he had two on this day. A seton was ordered to be introduced into the nape of the neck.

March 6. He has had no fit since the seton was introduced, and scarcely any cough, except that which is connected with his asthma. He says that he now feels as well as he usually does. After the operation of the emetic, which he took on the 4th, he felt a slight pain in the chest, but it has now subsided.

12. The epileptic fits have become more frequent again; and he ascribes them to the emetics. Let them be discontinued: let him take gr. j of oxide of zinc and gr. ij of extract of conium three times a day.

In reviewing the symptoms and progress of this case, it is evident that the combination of disease under which the patient is labouring, as well as the original conformation of his body, stand greatly in the way of any curative measures that might be adopted for his relief in either disease. Both diseases have been placed among the *opprobria medicinæ*, but, as I hinted respecting *phthisis*, this should rather stimulate our exertions to acquire more correct pathological views of them, and to try the influence of new remedies in the treatment of them, than suffer us to remain contented with the vague assumption that nothing can be done to remove them. The unexpected discoveries of modern times are sufficient to convince us that the resources of art are almost infinite, and require only to be searched after with industry to be brought to light.

Epilepsy has been usually regarded in two points of view—namely, either as depending on some affection of the brain, in which case it is termed *idiopathic* or *cerebral*; or connected with some morbid condition of other organs, the stomach, liver, or uterus in particular, under which circumstances it is viewed as being merely *sympathetic* or *occasional*. As far as my experience authorizes me to decide, my opinion is that the idiopathic or cerebral form of the disease is much rarer than is generally imagined; and I also think that the

condition of the brain, which is displayed in post-mortem examinations of epileptics, is more often the result of the disease when severe and long-continued than its cause.

The instance under consideration, I am disposed to regard as a case of *sympathetic epilepsy*; and that variety of it which has been named "stomachica" by nosologists. The patient says that, for a few days previous to each periodical seizure, when the paroxysms were not so frequent as they have lately been, his appetite is voracious; the tongue is loaded; there is cardialgia; the urine is high-coloured; he has a sensation of fulness of the hypochondrium and distention of the stomach after a meal. When he has vomited on these occasions, also, the egesta has been half-digested food; and to this condition of the stomach I am inclined to attribute the pain passing through the sternum to the spine, and causing a constant inclination to sigh which accompanies the fits. These symptoms are sufficient to authorize us to conclude that the digestive organs, rather than the cerebral are in fault; and this opinion is confirmed by the influence which the accompanying disease invariably exerts in deranging these organs. A question here arises, in what manner does the deranged condition of the stomach operate upon the brain to produce the epileptic paroxysm? There can be no doubt that, whatever may be the existing cause, the brain is the part of the frame chiefly affected, as we can form no idea of any other organ being able to exercise such an influence over the whole body, as to produce the symptoms of the epileptic paroxysm. But what this condition of the *sensorium commune* is, we know not; it certainly is not vascular distention, although congestion augments it. Some light might be expected to be thrown upon this question, by reflecting upon the nature of what is termed the *aura epileptica*; that feeling which often precedes the epileptic paroxysm, and which is referred to irritation in a nerve; but we know as little of the physiology of the nerves as of the brain, and we can form no idea of the state of the former that constitutes it the first of the chain of morbid actions that make up the disease. We can understand better the state of habit which usually predisposes to sympathetic epilepsy; and in our patient the disease can be traced to that susceptibility of impression which seems to depend on original conformation, and, in particular, to be closely allied with a strumous state of habit. It is only necessary to look at the patient to be convinced that he is naturally scrofulous; and you will find that this diathesis is almost as prevalent among epileptics as among phthisical patients. Why it is so I shall not venture to determine; but the fact that scrofulous individuals are more prone than others to nervous diseases, serves to explain why epilepsy is so frequently seen in persons of this diathesis. In epileptics also we find, frequently, a precocity of mental development; although one of the terminations of the disease, when severe and long-continued, is a state of idiotism. I have thrown out these hints, Gentlemen, rather to direct your attention into the proper channel for investigating the pathology of the disease than with the view of affording information upon this point. If we can discover the cause of increased nervous irritability, then we shall have little difficulty in clearing up the obscurity which involves the proximate cause of epilepsy, but not till then. With regard to the probability of recovery in this case, there is more to be hoped for in sympathetic than in cerebral epilepsy; but the constitutional weakness and the malformation of the chest, with the asthmatic tendency of our patient, are all against so favourable a prognosis. The influence of mind in this disease is well known, and, consequently, much will depend upon the hope of recovery with which I have endeavoured to impress the patient being kept up. This is particularly important in cases such as that before us, in which the fits return at intervals; the disease almost becomes habitual, and is often maintained by custom after the causes are removed. When this is the case, confidence in the plans proposed, and the hopes held out by the physician, have often a most salutary influence. Something, also, will depend on the nature and the quantity of diet. The latter, in particular, should be under judicious control. The trade of the patient, a shoemaker, is greatly against him, nothing being worse in this variety of epilepsy than sedentary habits and confinement to the house.

With respect to the treatment in this instance, it has proceeded altogether on the idea that the case is one of *E. stomachica*, in which my experience has led me to place more confidence on emetics than on any other medicines. Many practitioners consider that the regulation of the bowels is sufficient; but, when we find that the vomited matter is often food which had been taken into the stomach two or three days before the administration of the emetic, there can be no doubt of the necessity of removing such a source of irritation, and of the propriety of emetics. But the removal of crude matters from the stomach is not the only advantage resulting from the employment of emetics. The shock given to the frame is of impor-

tance, in breaking established catenations of symptoms, particularly when the emetic is administered near the return of the expected paroxysm. In this case, there was no reason for suspecting any intestinal irritation from worms; but this is not an unfrequent cause of sympathetic epilepsy. The treatment required has reference solely to the existing cause, the worms; for, by removing these and taking measures to prevent their return, the epilepsy spontaneously subsides.

PARALYSIS OF THE LEFT ARM.

The case of Charles Brennan is one of those which afford us the means of ascertaining the value of strychnia in partial paralysis. The patient is a labourer, 59 years of age. In August last he had the misfortune to fracture his left ankle, for which the limb was obliged to be amputated; and the stump is not yet completely cicatrized. About a fortnight since, after being exposed to cold, he lost the use of his left arm. The power of volition is not altogether gone, but it is much diminished; there is a dull pain in the arm, but he has no tenderness of the spine. The respiration is natural; the bowels are regular; and the tongue is very slightly furred. He was ordered to take the tenth of a grain of acetate of strychnia every fourth hour, and gradually to increase the dose until tetanic twitchings occur.

This is one of those attacks of partial paralysis which cannot be traced to any particular state of the nervous centres, and which appear even in the best health. The attack always occurs in the night, and alarms and depresses the mind of the sufferer. Sometimes there is a total loss of power, either of the entire arm, or a partial loss, as in this case, with a sense of numbness, extending more especially to some of the fingers, whilst the others are little affected. There is here no inability to raise the arm, and the power of bending the fore-arm remains. I have seen instances of this local palsy affecting particular muscles only. In the case before us, the muscles that flex the ball of the thumb seem most paralysed. It is extremely difficult to account for this form of paralysis: but it is important to inquire into the condition of the brain and spinal chord, as it is often a prelude to a more general attack. In our case, the nervous centres seem to be unaffected, consequently the diseased state is probably confined to the brachial plexus, or rather some of its branches; and, as the flexors are the affected muscles, particularly the adductor and short flexor of the thumb, the median nerve is probably that which is chiefly affected. Paralysis thus influencing particular nerves, is more common than is generally supposed. As far as the face, the tongue, and the respiratory nerves, are concerned, you will find many cases detailed in the Appendix to Bell's Exposition of the Nerves. In delivering this as my view of Brennan's case, it may be asked, in what manner I expect that strychnia shall prove useful, if the motor tract of the spinal chord remains unaffected, seeing that it is upon that part of the nervous system that strychnia operates? Were I confident that this is the case, I would not order strychnia; but my mind is not completely satisfied upon this point; and we have ample proof that affections of that part of the spinal chord display their effects often first on the upper extremities. Such is the case in paralysis from carbonate of lead. It only differs in one respect, namely, that in the paralysis, connected with poisoning by lead, the wrists are the parts chiefly affected; in our case it is the hand, and in particular the thumb. With regard to the employment of strychnia and its salts generally, the greatest diversity of opinion exists; some practitioners extolling them, others asserting that there is always danger attending their employment from the risk of augmenting cerebral irritation. Now it is scarcely necessary to say, that all stimulants are equally dangerous in paralysis, if there be the smallest tendency to cerebral excitement; but it is undeniable that there are many cases of partial paralysis in which stimulants prove salutary; and, admitting this, I contend that the best of these is strychnia and its salts. It has been stated, also, as an objection to this medicine, that its effects are very uncertain, one-twelfth of a grain sometimes acting powerfully, and quickly causing tetanic twitching; whilst in other cases a grain has been given without any obvious effect. I have no hesitation in asserting, that such discrepancies are attributable either to the improper mode of prescribing the medicine, or to its impurity. I formerly gave you my reasons for affirming, that it should always be prescribed in combination with an acid, either as an acetate or a muriate; and I have now to say, that nothing is more important than to be certain that the strychnia is pure. Almost all that which is procured for medicinal use, contains a larger proportion of brucia than of strychnia; and the activity of the medicine is in the inverse ratio of the quantity of the brucia, one sixth of a grain of pure strychnia being equal to one grain of brucia. The only mode of determining the purity of the strychnia is

to test it by nitric acid, the deeper the red which is produced, the greater the admixture of brucia; indeed no strychnia should be employed that is tinged more than of a pale reddish-yellow hue by nitric acid. The brucia is readily removed by macerating the impure specimen in dilute alcohol, which does not take up the strychnia. One grain of pure strychnia, dissolved in f.℥j of distilled vinegar, affords a solution which may be given at first in doses of six minims, and afterwards gradually augmented until twitchings take place in the paralysed member, after which the dose should again be diminished. It should also be recollected, that the benefit is sometimes not obvious until the use of the remedy is discontinued, after its specific effect has been obtained. We shall see how far these remarks are confirmed by its influence in the case now under treatment with it.

VARIOUS CASES.—I have no new case of any interest on the female side of the hospital, to bring before you. The case of *peritonitis*, in a woman of the name of Fitzgerald, has proved fatal. That of *gastro enteritis* in Sylvester is nearly in the same state in which it was last week; the vomiting of bloody mucus, and the burning sensation extending through the whole of the alimentary tube, still continue. She is always relieved by leeching. As nothing remains many minutes on her stomach, it is remarkable that the powers of the constitution are capable of supporting the depletion. She complains now of pains of the head, and the scalp feels hot; another proof of the intimate sympathy between the gastro-intestinal surface and the nervous centres. It is to this only that we can attribute the hysterical symptoms that always more or less accompany gastritis, and often greatly tend to obscure our diagnosis. We see this connexion most strikingly in melancholia, in which the pain of the stomach is almost as acute as if gastritis were present, and it is also attended with vomiting after every meal; but in melancholia the pulse is always slow and compressible, the skin is cold, and the expression of the countenance is more that of deep mental dejection than that of pain.

The case of *hepatic abscess* in Bugine is improving since the seton was introduced into the side; but the cough is still very urgent, and the expectoration has a mucopurulent aspect.

Langridge, who has been labouring under an anomalous and most unmanageable morbid condition of the nerves, *closely resembling neuralgia*, only extending nearly over the whole of the left side of the body, has been feverish for two days, and is, I fear, taking small-pox, as a woman in the same ward is at present under the influence of the modified disease after vaccination. Langridge has not been vaccinated. How far the impression made by this new disease may affect the state of the nervous system, we shall have ample means of observing.

CLINICAL SURGERY.

LECTURES

DELIVERED AT THE

NORTH LONDON HOSPITAL,

BY

ROBERT LISTON, Esq.,

Surgeon to the Hospital, and Professor of Clinical Surgery in the University of London.

LECTURE X.

HERNIA.

GENTLEMEN,—It is my intention to-day to offer some remarks on the subject of hernia, in reference to two cases which have presented themselves very lately; and I seize the opportunity of doing so before the last of these cases shall have passed from under your observation. The disease is one which must excite in you a very great degree of interest. It is of the utmost consequence that you should thoroughly understand it in all its relations and states, and *that*, it would appear, is, somehow or other, no very easy matter. The natural and healthy structure is not very complicated; but even that, the young surgeon finds it puzzling and difficult to understand thoroughly. This in some measure arises from the multiplicity and confusion of terms.

But if the arrangement of the natural structure is not easily comprehended, what are we to say of the displacements which are met with, and the alterations in form and substance, which necessarily follow? Whatever the difficulties are, these must all be overcome before you venture into the practice of your profession; and if, with the opportunities offered you here, you apply yourselves diligently to the task, you will very soon conquer them. The disease is of common occurrence, and such changes and symptoms take place suddenly as to demand the most active and well-directed interference for their removal. This may happen to any one of

you at your very outset in practice, and under circumstances in which you have no means of reference, and can have no further assistance. You will be called upon to act with promptitude and decision, and if you are not prepared to do so, you may perhaps have to accuse yourself of the wanton sacrifice of a valuable life.

Case 1.—The first case I shall notice was lost through delay, not, certainly, on the part of the practitioner who sent the patient to the hospital, for he had not seen her an hour before she was admitted. She stated her age to be sixty-seven. She was admitted Feb. 14, at eight o'clock p.m., labouring under urgent symptoms of strangulated hernia. She stated that for some time past a swelling had occasionally appeared in the right inguinal region, which was always reducible by pressure. Eight days ago, after some slight effort, the swelling again appeared, but this time she was unable to reduce it. The tumour shortly became painful and tender; general abdominal pain, with violent and constant vomiting supervened, and the bowels were obstinately constipated. She was seen by a medical man, who made various ineffectual attempts to return the hernia, and administered purgatives freely, but without effect. On admission she was slightly delirious; her manner was hurried, and occasionally she answered questions somewhat incoherently. Her features were contracted and anxious; she was constantly tossing about in bed; her pulse was 96 at the wrist, weak, at the ancles almost imperceptible: her skin was moderately warm, the tongue pretty clean, but rather dry in the centre. The tumour was situated along and rather below Poupart's ligament, towards its pubic attachment; it was ovoid, firm, and defined; there was considerable but not acute pain in the swelling; the skin over it was lax, and not at all discoloured; there was general abdominal tenderness, and in the right iliac region there was a pretty large and defined tympanitic swelling.

Shortly after her admission she had some vomiting of feculent matter. An attempt at reduction was made, but unsuccessfully. I was then sent for, and after examination, an operation was thought proper. The usual form of incision for femoral hernia was made. On scratching through the superficial cellular tissue, a considerable quantity of fetid matter escaped; below this the parts were so agglutinated and disorganized that the tissues could with difficulty be distinguished from one another, and from the sac. A small globular swelling, which appeared to be the appendicula vermiformis coiled up, was returned with ease after dividing the stricture. The edges of the wound were approximated by three sutures. No relief followed the operation. She gradually sunk, and died about three hours afterwards.

Sectio Cadaveris.—On laying open the abdominal cavity, marks of general peritonitic inflammation were found. There was a considerable quantity of serous effusion, mixed with flakes of lymph, and in the left iliac region, the intestines were adhering to the parietes of the abdomen, in the situation where the tympanitic swelling had been observed during life. On examining the crural ring from within, it was found that the extremity of the vermiform process was still retained in it, bound by very firm adhesions, apparently of some standing, to the neck of the sac. The piece of small intestine which had been strangulated, was found lying loose in the cavity of the abdomen, and in its natural situation. A portion only of the intestine, about one half the caliber of the tube, had been strangulated; it was in a state of gangrene, and had given way. The neck of this portion, where the stricture had existed, was marked by a deep-red indentation. Beyond this line the protruded part was entirely in a state of gangrene, while the portion on the other side was simply much injected. My impression, as stated at the time of the operation, and also before the post-mortem examination, was, that a portion of the bowel which had been included in the sac, must have passed back into the cavity of the abdomen in a gangrenous state, and probably was perforated. Thus only could the symptoms be accounted for. The piece of bowel is here preserved, and here also you have the sac, a very small one, exposed; the extremity of the appendicula vermiformis, which had been wholly protruded, is seen adhering to the neck of the sac.

I certainly entertained very slender hopes of preserving the life of this poor woman by any proceeding that might be adopted. She was in the last stage of exhaustion from the consequences of obstruction of the intestinal canal, accompanied by violent peritoneal inflammation.

Even in the very worst cases, however, and in the most advanced state of the strangulation, when there is good reason to suppose that the contents of the hernia are in a sphacelated state, the surgeon is called upon to interfere; to divide the coverings, and to give vent to the contents of the bowels. You must know that in a great many cases the cavity of the sac is cut off from that of the peritoneum, by the attachment of the protruded parts to the neck of the sac by organized lymph

and recent adhesions; that many patients have been relieved from the symptoms of strangulation, and have ultimately got over the terrible inconvenience of passing the feces, through an artificial opening, even after a considerable loop of the intestine has sloughed off. This is much more likely to take place when the whole caliber of the bowel is not included, as in this instance. The sac forms a sort of funnel, into which the fecal matters are discharged: the whole or great part of these are evacuated through the opening in the integuments; but by the retraction of the bowel and peritoneum, and by the more complete opposition of the upper and lower openings, as well pointed out by SCARPA, the matters often naturally find, through time, their natural course. In some cases, by pressure and by the destruction of the septum betwixt the two orifices, the cure has been forwarded in artificial anus of long standing. Had the bowel, in this case, been confined in the manner I have indicated, and had the contents been permitted to escape in the groin, and the patient been got over the other serious consequences of the strangulation, in all probability nature, unassisted, would have brought about a cure of the false passage at no very distant period.

A very calculating and politic practitioner might probably not have interfered in a case so far advanced. He might have declined risking his credit and reputation; but I trust none of you will ever put these in competition with a chance, however remote, of saving a patient. Such mean and pitiful considerations ought to have no weight in a case of life and death. The result of non-interference is plain enough in such a case; on the other hand, under the most desperate circumstances, the patient's life has been preserved, and the course of the intestinal matters has ultimately been restored. I have witnessed many such cases; the records of surgery afford numerous instances of it, well deserving your attentive perusal.

The other case was, in every respect, very different as regarded the age of the patient, the period of strangulation, and the nature of the symptoms. I am pleased that many of you have taken advantage of my suggestion that you should be made aware of the admission of interesting cases at unusual hours; and I should certainly have regretted much that an operation, as it turned out, of so unusual a kind, should not have been witnessed by a considerable number of you.

Case 2.—The patient, George Napp, æt. 36, a healthy, robust-looking labourer, was admitted late on the evening of the 26th of Feb. He stated that he had been affected with reducible inguinal hernia for the last fifteen years,—that it was generally easily reduced, either by his assuming the horizontal position, or by gentle pressure. Occasionally, however, when, after any violent effort, more than usual of the intestine had descended, he met with considerable difficulty in returning it, and once or twice it remained down two or three days before it could be reduced. He then suffered much from abdominal pains. On the 23rd, in consequence of some unusually violent exertion in riding a restive horse, the bowel again protruded. He made several efforts to reduce it, but without success. The tumour shortly became extremely tender, general abdominal pain supervened, and in a few hours severe vomiting came on. A surgeon was then called in, but in consequence of the patient having, from some cause or other, concealed the existence of the hernia, he was believed to be labouring under a peritonitic affection, and treated accordingly. No relief was produced by the treatment, and it was only this morning that the surgeon was made acquainted with the true nature of the case. Attempts were then made to reduce the hernia, and it was at first believed with success; but the urgency of the symptoms remaining unabated, it was supposed that a portion still remained unreduced, and he was recommended for admission to the hospital.

On examination, on admission, an elastic tumour, about the size of a small egg, was found in the right groin, evidently depending on the presence of intestine. The right testis was not in the scrotum, but was situated at the external ring, much atrophied. He stated that it was formerly in its natural situation, but had gradually assumed its present position, subsequently to the frequent descent and reduction of the bowel.

On attempts being made to reduce the protrusion, it was found that it could be returned entirely within the external ring, but that a degree of fulness remained in the upper part of the canal, and that the tumour immediately returned on removing the pressure. On pressing upon the tumour, and passing the finger up through the external ring, which was somewhat dilated, a small swelling was felt about the middle of the canal, which did not yield in the least to any degree of pressure consistent with safety. The abdominal pain was very severe, and the tumour very painful and tender. He had almost constant hiccough, and had vomited considerable quantities of feculent matter shortly after admission. The bowels had not been moved since the time of the ac-

cident. He was extremely restless, constantly tossing about and moaning. The face was flushed, the expression of countenance anxious; the skin was hot; the pulse 100 and sharp. He was put into a warm-bath, and there retained until faintness came on, when another attempt was made at reduction, but with the same result as formerly. A large injection was also given, but the fluid immediately returned unchanged.

No further attempts at reduction were made, and the operation was commenced. An incision about four inches in length was made, beginning at the neck of the tumour, and continued downwards and inwards in the course of the canal. After dividing with the scalpel, the hand being unsupported, the three layers, not much thickened or condensed, a membrane was reached, which at first sight appeared to be the hernial sac; but on laying it open it was found to be the tunica vaginalis, slightly distended with fluid; the hernial sac which protruded into the upper part of this was exposed by extending the incision of the tunica vaginalis upwards. A very dense layer was carefully cut through so as to expose the sac, which was then laid open, and a small quantity of fluid permitted to escape; a few slight adhesions, which existed between the lower part of the knuckle of intestine and the sac, were separated. The stricture, which was situated at the internal ring, was divided by the common probe-pointed bistoury, guided by the fore-finger of the left hand, and the intestine reduced with ease. The edges of the wound were then brought together with three points of suture, and compress and spica bandage were applied.

A large emollient injection was given immediately after the operation, which passed with the greatest ease, and was retained for upwards of half an hour, when it came away mixed with feculent matter, and was followed, within the two hours, by four other copious thin feculent stools. He had no return of the vomiting or hiccough, and though some abdominal pain remained, it subsided entirely after the evacuation of the bowels. The restlessness ceased, and he slept well for a great part of the night. In the morning the pulse was 90, and of moderate strength; the skin was less hot, and the face less flushed; the abdomen remained free from pain, and he bore pressure on it without shrinking; his only complaint was of some slight uneasiness arising from the wound. ℥ss of the *Ol. Ricini* was given with a few drops of the *Tr. Opii*. In the evening he continued perfectly free from pain; the bowels had been opened three times by the draught; the pulse was 90 and soft; the skin cooler, and the face less flushed, and he had slept at intervals during the day.

28. Slept well during the night, and still remained free from pain; but the pulse, which had risen to 120, was more sharp; the skin was hot, the face somewhat flushed, and he was a little restless; ℥xxiv of blood were drawn, with the effect of producing slight faintness and diminishing the heat of the skin, flushing of the face, and the strength and frequency of the pulse; the blood was much buffed; ℥j of a mixture containing ʒiss *Sol. M. Morph.* and ʒss of the *Vinum Tart. Antimon.* to ʒviii of water were also given, and were ordered to be repeated every two hours.

March 1st. Pulse 88; tongue clean; no complaints of pain; bowels moved twice; skin cool. Cont. Solut.

2. Some swelling with slight pain of the scrotum; the wound was beginning to discharge; bowels open; pulse as yesterday. Om. the *Sol. Tart. Antim.* The scrotum to be fomented, and lint dipped in warm water, and covered with oiled silk to be applied to the wound.

Now, gentlemen, it so happens that in both these cases which I have thus brought under your notice, operations were judged proper and were resorted to without delay, on the patient's admission into the hospital. You may from this be led to suppose that a surgical operation is indispensable whenever a portion of the viscera has escaped through an opening in the abdominal parietes. When it has become confined in this situation, and when symptoms of strangulation have ensued, I cannot caution you too strongly against adopting such an opinion, and acting upon it; or, indeed, against having a rash, precipitate, and inconsiderate recourse to operation, in this or in any other case, however urgent. The necessity for the operation in hernia is by far too much and too indiscriminately inculcated. It is often resorted to unnecessarily, and the dangers of it are made too light of. There is certainly great danger in delay in many cases, but on the steps to be adopted the surgeon must decide forthwith upon being called in, and if he be good for anything, in most of the recent cases there will be no necessity for resorting to operation for the opening into the shut sac of the peritoneum, is an accident which at all times is attended with much danger. Patients do die from the effects of the incisions, whilst the fatal result is attributed, very improperly, to the consequences of the strangulation. How many patients die after reduction by the taxis when that is

employed in good time and in proper cases? when the tumour is not of an enormous size, or the contents are in a state of gangrene.

The fact is, that in the majority of cases of hernia in a state of strangulation, if at a sufficiently early stage the taxis be *properly* employed, success will follow; the parts will be replaced, and the patient freed from all his painful uneasiness without the slightest risk. In order to ensure the success of this practice, the patient must be well placed so as to relax the abdominal parietes and openings, and the efforts must be perseveringly yet gently made. Bleeding, or the warm-bath, according to circumstances, may be brought in aid of this method. Cases must, however, often present, more especially amongst the labouring classes, when from the nature of the attempts of this kind which have been made, from the duration of the symptoms and state of the parts, any further or persevering attempt at reduction must prove fruitless, or highly dangerous to the patient. You are well aware of the effects which follow the escape of a mortified portion of bowel into the peritoneal cavity.

In cases of hernia in which the symptoms of strangulation have been urgent, and of some continuance, you must consider and weigh well all the circumstances; your decision must be prompt, and when it is manifest that no other means of relieving the strangulation and saving the patient remain but by operation, then should you proceed with all convenient speed to its accomplishment. The operative procedure must be conducted deliberately, nor can too much caution or circumspection be employed, for in this operation the most experienced will occasionally meet with appearances of an untoward and unexpected nature. The coverings require to be dissected and unravelled and the contents unfolded and examined with great care. It is upon such examination that the ulterior proceedings come to be determined. In *Napp's* case the symptoms were urgent, and of some continuance; the abdomen was very tender and tumid; the contents of the bowels were ejected by the mouth; various but ineffectual attempts had been made by taxis, and the tumour had become painful. The immediate reduction was indispensable, and this could be effected by an exposure of the parts, and a removal of the impediment, in fact only by a division of the stricture. An incision was made over the tumour, and in the course of the inguinal canal which it occupied. The layers not so much thickened as usual in hernia of long standing, were divided as described in the journal, and a serous sac exposed. This upon being opened proved to be the tunica vaginalis testis distended by its secretion. In it was contained a blighted testicle, and above a tumour, over which was expanded the posterior layer of the tunica vaginalis. I should certainly have been a little put about by such an appearance, had I not witnessed a similar case when house surgeon of the Royal Infirmary of Edinburgh. The operator was the late Mr. George Bell, a very good surgeon and steady operator. He was backed by some half-dozen consulting and assistant surgeons. They were taken aback, retired, leaving the patient on the table, to a small room behind the seats of the theatre, where I recollect well the Ambe of Hippocrates and other antique machinamenta were preserved. They consulted some time, returned, and completed the operation. I may be excused reading a very short notice of this case as recorded at the time, and of the supposed relation of parts. I shall read the whole passage.

"*Hernia Infantilis* differs from the hernia congenita, and is a kind of protrusion peculiar to the early period of infancy. In the congenital form, the protruded intestine is in immediate contact with the testicle, and surrounded by the tunica vaginalis testis; but in this a process of peritoneum is interposed betwixt the intestine and vaginal coat. The affection occurs after the abdominal aperture of the spermatic process has closed, but before the rest of that process has been incorporated with the spermatic vessels and their surrounding cellular tissue. In fact only the peritoneum proper has closed, and forms the septum between the cavities of the abdomen and tunica vaginalis; but being insufficient to withstand the impulse of the abdominal contents, yields before it, and descending along with the protruded portion of bowel, forms its envelope or the proper hernial sac within the cavity of the tunica vaginalis."

Such is the opinion generally adopted with regard to the nature of hernia infantilis; but its accuracy is doubtful. It seems more probable that the bowel, covered by a fold of peritoneum, is protruded into the cellular tissue of the spermatic chord, after closure and contraction of the spermatic process, and descending until it reaches the upper and posterior part of the tunica vaginalis, adheres to that tunic, bulges it forward, and is covered by it. On cutting down in such a case, the hernial tumour may appear to be lodged within the tunica vaginalis; whereas the bowel is actually placed exterior to the tunic and behind it. Indeed, the case is similar to the common scrotal

hernia, only the tumour is behind, not anterior to, the vaginal coat. This relation of parts is more apt to occur in the infant than in the adult; for in the former the testicle does not for some time descend fully into the scrotum, and whilst it is lodged in the groin, a fold of peritoneum, protruded into the spermatic chord may soon contract adhesion with the tunica vaginalis, afterwards descending along with it and the testicle.

The subjoined case, illustrative of the preceding statement, came under my observation in 1814:—

Case.—"I. Smith, ætat. 21, was admitted into the *Royal Infirmary*, Edinburgh, with symptoms of strangulation, which had been of eight days' duration. The hernia had existed from infancy; it was on the right side, and tolerably large. In the operation, on dividing the integuments and various coverings, a sac was opened, which proved to be the tunica vaginalis, containing the testicle, a considerable quantity of serum, and a large smooth transparent tumour above the testicle and behind the posterior layer of the tunica vaginalis. The operator was puzzled, but finally determined on cutting into this tumour; it proved to be the hernial sac, covered by the tunica vaginalis, containing three or four ounces of serum, and a portion of omentum. The protrusion could not be returned; after relieving the stricture, the omentum was cut away, and the bleeding vessels were tied separately. The patient died on the third day after."* No dissection was permitted to be made.

So far as it is possible to judge from what appeared during the operation now detailed, and from the dissection necessary in accomplishing the object of the operation in the case you have witnessed, the relation of parts is the same as observed in dissections of two large herniæ, made by the late Mr. Todd of Dublin, and related by him in the first volume of the "Dublin Hospital Reports." He seems to look upon this arrangement of parts as pretty common. He says that, at an institution for supplying the ruptured poor with trusses, he remarked that in several large scrotal herniæ, the testicle was situated completely at the bottom of the tumour; that these cases were frequently complicated with hydrocele, and that when the contents of the sac had become irreducible, patients complained of inability to wear a suspensory bandage, in consequence of the inconvenient position of the testicle." He could not account for this circumstance, until he had an opportunity of dissecting a case similar, so far as I can judge, to that of *Napp*. Now you will see from the numerous specimens, wet and dry, drawings and plans of hernia before you, that that inconvenient organ the testicle is always placed at the lower part of the *common scrotal* hernia, and frequently rather a little towards its anterior aspect, so that no conclusion can be drawn from Mr. Todd's experience at the truss establishment. He has very satisfactorily shown that accumulation of serum in the tunica vaginalis is more likely to arise in this form of rupture than in any other, in consequence of the more direct pressure upon and interruption of the circulation in the veins. You will, no doubt, be on the look-out in your dissections for such hernial tumours as those I have been trying to describe to you. Depend upon it they are of rare occurrence. You have fortunately seen one case, and now you will be prepared, should such an appearance present in operation, to proceed without hesitation. The dissections of Mr. Todd, to which I have referred, and the case which came under my observation, and which I have read to you, are the only ones on record, so far as I know. There are two other cases published, one by the late Mr. Hey, the other by Sir Astley Cooper, as furnished to him by the late Mr. Foster, which may probably have been somewhat of the same nature as this of *Napp*, and the others I have referred to. But a different account is given of their connexions and mode of formation.

I have already given you the commonly received explanation in the extract which I read under the title of "Hernia Infantilis." Here is a plan of this hernia, copied from an account of the case, by Mr. Hey's son, in a history of his father's life and writings. Here, also, is a diagram of what I suppose to be the true state of matters in all these cases. In the one, the protrusion hangs loose in the distended cavity of the tunica vaginalis, like the tongue of a bell; in the other it is bound down by the tunica vaginalis, and covered by it only on its anterior aspect. What is the exact position of the parts composing the chord, or whether their position is uniform, I cannot pretend to say. The vas deferens could be felt on the inner and posterior part of the neck of the sac during the operation; very probably it was separated from the vessels.

It is quite possible that a closure may take place of the tunica vaginalis, above the testicle, opposite or below the external ring, that the tunica vaginalis of the chord may remain unobliterated and continuous with the cavity of the peritoneum. Into this process a descent may take place,

* "Elements of Surgery," vol. 3.

without the tumour being at all pendulous or detached around. It strikes me that one of the preparations in the pathological collection of the University illustrates this variety of hernia. Here the division of *one layer* of *serous* membrane will expose the contents. In the other of which we have been speaking, *three layers* of *serous* membrane are interposed.

In the performance of the operation on *Napp*, you would observe that the stricture lay very deep; in fact, in the situation of what has been called the "internal ring." This stricture was divided by the introduction of a bistoury on the finger. A slight notch was made on the edge of the stricture, and along with it was cut the small portion of peritoneum covering it. No attempt was made to push the knife outside this membrane so as to divide the tendon or fascia, far less to divide the stricture without opening the sac. If the sac is to be opened, which is almost always proper, in order to ascertain the state of the contents, to determine as to whether they are in a fit state to be returned or not, then it is surely a useless refinement and complication of the process to set about saving half an inch, more or less, of the neck of the sac. Besides, you must keep in mind that the neck of the peritoneal sac is frequently contracted permanently, so as to act as a cause of strangulation. The *strangulation*, interruption to the return of blood, and passage of the intestinal matters, does not depend upon any change in the state of the containing parts, so much as upon the condition of those contained. The neck of the sac is firm enough of itself to resist dilatation, and in order to relieve the protruded parts this must be divided equally as the fibrous investments.

You would observe, that after the stricture was cut, the same attention was paid to position of the trunk and limbs as in the attempts at the taxis; and in reducing the portion of intestine, the sac was firmly fixed in its position. If these points are not attended to, the difficulties of reduction are much increased, and you may be altogether foiled in your attempts; you may think the obstacle is occasioned by the stricture, and this may be notched again and again without effect. Much time is often spent in this way, and very unprofitably to the patient; the bowel and sac coming down so soon as the pressure is removed.

As regards the dressing, you will find it quite essential for the first thirty-six hours to apply firm compression, in order to prevent the re-escape of the intestine or omentum. When the common T bandage has been resorted to for this purpose, I have more than once seen unpleasant consequences follow.

After the operation, the prognosis is always rendered more favourable by the free evacuation of matters downwards, the cessation of vomiting and pain in the abdomen. The action of the bowels from above may be solicited by large warm enemata. These act beneficially; but some time must be permitted to elapse before medicine, even of the mildest and least irritating kind, is put into the stomach.

You are fully aware I presume, that although this patient has been cut for rupture, he is not freed from the risk of further protrusion. In the old operations, when the neck of the sac was tied, the chord being included, when the testicle was really cut away, and even when exfoliations from the os pubis followed the cauterizations, the rupture came down as before. It will be proper for the patient to be fitted with a truss, which, in consequence of the awkward position of the testicle, will be no easy matter. But this will all be arranged before the patient leaves us, which I expect will be on a very early day.

I shall revert to this subject on some early occasion, and notice then such points as have been omitted at this time.

LIGATURE

OF THE

SUBCLAVIAN ARTERY,

FOR THE CURE OF AN

ANEURYSMAL TUMOUR OF THE INNOMINATA;

WITH A CASE AND OBSERVATIONS.

By CLAUDIUS TARRAL, *Esq., Ex-Surgeon-Major to the Polish Army, &c. &c.*

BRASDOR's proposal of tying an artery on the distal side of an aneurysmal tumour, again put to the test of experiment and strenuously advocated by Mr. Wardrop, has excited great attention. Many surgeons have judged this ingenious operation without thoroughly understanding its true principle of action; and others have denied its success, or have explained it by theoretical views which will not bear inspection. Brasdor, Desault, Deschamps, and Boyer, the first who wrote on this subject, imagined that this operation would completely obstruct the circulation, and therefore allow coagulation to take

place within the tumour, or might even cause the rupture of the sac. Sir Everard Home, it is supposed, first observed that after John Hunter's operation the circulation sometimes continued through the tumour; he therefore concluded, that a simple diminution of the force of the circulation was sufficient to produce coagulation in the sac, and hence to effect its obliteration. Mr. Wardrop applied the same reasoning to Brasdor's method, and established a complete analogy between these two operations, maintaining that nature employs a similar process in the spontaneous cure of aneurysmal tumours. In fact, as Mr. Wardrop has justly remarked, these spontaneous obliterations entirely confirm the principle of the Brasdorian operation.

Besides the cases mentioned by authors (see Sir E. Home, Sir C. Bell, Wardrop, &c.), there is a beautiful specimen of the spontaneous obliteration of an aneurysmal tumour of the arteria innominata, coinciding with the entire closure of the right carotid artery, among the anatomical preparations of the *London Hospital*. The subject of this case was under the care of Mr. Luke, who employed venesection to a great extent; unfortunately the history of the patient is too briefly recorded in the catalogue of the museum; his death was attributed to disease of the brain, supposed to have been produced by deficient arterial circulation.

Although Mr. Wardrop has laid great stress on the true principle of the Brasdorian operation, many most talented surgeons still profess the old opinion, that of its inventor, that it causes a complete stoppage of the blood. The consequence is, that they insist upon no branch existing between the ligature and the tumour; under this condition alone will they undertake the operation, and according to this fact they explain its success or its failure. Before I attempt to combat these opinions, I will lay before the reader a most interesting case, which will contribute much towards forming a correct notion of the value of this method.

Case.—I was requested by my excellent friend M. Laugier, surgeon to the *Necker Hospital* of Paris, to examine and give an opinion on the disease and treatment of the following patient.

M. Clery, aged fifty-seven, complained of troublesome catarrh, dyspnœa, difficulty in swallowing, and incapability of placing his body in any but the erect posture. His neck presented a tumour of the size of a large hen's egg, which pulsated synchronously with the radial artery. The tumour extended about two inches above the right clavicle, whose sternal extremity it had dislocated, and pressed against the trachea, which was visibly pushed to the left side. Outwards, it reached to near the middle of the right clavicle; downwards, to about two inches from the top of the sternum, which was here prominent.

Several large superficial thoracic veins covered the tumour, and anastomosed with the veins of the neck. These symptoms might have led to a belief that the subclavian and right carotid arteries were alone affected; but on carefully examining the tumour, there was great reason to suppose that the innominata, and perhaps even the arch of the aorta itself, participated in the disease. The deviation of the trachea to the left side; the dull sound furnished by percussion on the first and second ribs, where no tumour was sensible to the eye; the difficulty of breathing; the peculiar resonance of the voice, which was of an œgophonic character, easily distinguished by auscultating the back of the chest, a symptom of great importance in these cases; the impossiblity of feeling the termination of the tumour below the clavicle, joined to a consideration of the frequency of coexistent aneurysms of the innominata and aorta &c., were the principal sources from whence we formed that diagnosis. The tumour, which the patient attributed to a blow he had received, was now considered to be the principal cause of all his symptoms. M. Clery, although much weakened by his disease, was still in a tolerably good condition for an operation, to which he gladly consented.

M. Laugier having for several days administered opiates, determined (12th June, 1834) on taking up the right subclavian artery soon after it passes beneath the clavicle. Much against my wish, M. Laugier followed M. Lisfranc's mode of operating, that is, by cutting between, or, if possible, by separating, the sternal from the clavicular portion of the pectoralis major muscle. But proceeding thus, the surgeon attained the artery with great difficulty, and only after having transversely divided the clavicular portion of the pectoralis muscle. The vessel was then isolated, and tied by a single silk ligature. The great dyspnœa which the patient experienced by extending the neck during the operation, necessarily rendered it tedious and painful, and it would now have been almost impossible to put a ligature around the carotid artery, which I proposed to M. Laugier, thinking it would afford a greater chance of success. The operator being always opposed to this view, we paid but little attention to the state of that vessel's pulsations.

The lips of the wound were brought

together by sticking-plaster, and the patient was put to bed. No visible change occurred in the tumour immediately after the ligature was tightened.

The following day (13th) the tumour was evidently smaller, its pulsations were weaker, and the patient was able to sleep, which he had not done for several nights previous to the operation. The radial artery did not beat, the limb was natural and comfortable.

June 14. He felt much relieved, breathed easier, swallowed better, and demanded food, which was granted to him; the pulse in the left arm was good.

19. The patient went on well until this day, when a slight hemorrhage from the wound took place; the blood was of an arterial colour. This accident returned several times, but entirely ceased on the 22nd.

27. The patient assured me that he now perceived that his trachea was resuming its natural position; he complained of pain in the shoulders and back; was constantly sitting with his chest erect, and his head bent forwards and downwards; the pulse in the right arm was sensible to the touch. The ligature still remained in the wound, which continued to suppurate; the veins covering the tumour were much diminished.

July 2. He complains of pain in his back; his cough torments him; the tumour in its most elevated point seems to beat more strongly than before the operation. Acetate of lead and digitalis, in small doses, were now prescribed.

9. A violent paroxysm of dyspnœa came on, which was combated by bleeding; the cough continued, the respiration was very laborious; insomnia.

All these symptoms increased, and the patient expired on the 12th, one month after the operation, the ligature still remaining in the wound.

Post-mortem Inspection Twenty-four Hours after Death.

The limits of this communication will not allow me to give a minute description of the various interesting morbid states which were discovered; what pertains especially to the operation will alone be noticed. On laying open the thorax we found a large aneurysmal tumour of the arteria innominata, the pendicular length of which was five inches and a half (French measure); its breadth from side to side was six inches five lines; the tumour evidently pressed against the trachea; the bronchi were considerably flattened. The aorta was also dilated; its arch, in its middle, measured six inches three lines in circumference; immediately after it gives off the left subclavian artery, its circumference was three inches; the inner membrane of the aorta presented numerous and common cartilaginous points. The arteria innominata was the real seat of the aneurysmal tumour; its membranes could not be traced far; the sac was nearly filled by firm, dense, coagulated layers of fibrine; the lower part of the tumour contained more-recently formed coagula, and one coagulum, most probably formed since death, extended into the descending thoracic aorta.

The right common carotid artery, from its origin to within a third of its extent, was completely obliterated, and presented here and there singular valvular-like pseudo-membranes. The right subclavian artery, of natural diameter, was quite pervious to within half an inch of the point where the ligature was applied—that is, two inches ten lines from the internal mammary artery, or one inch eleven lines above the circumflex humeral artery. The ligature had divided the axillary artery, but was retained in the wound by a coagulum which had formed in its noose during the hemorrhage, which probably came from the lower end of the divided vessel, which was much less firmly closed than the upper one, and into which the clot evidently extended. Besides, close to the lower mouth of the artery existed a tolerably large collateral branch, which may have been the cause of the hemorrhagy, and the less perfect obliteration of this part of the arterial trunk. The subclavian artery was alone tied; the branches given off between the tumour and ligature, viz., the vertebral internal mammary, thyroid axis, &c., were of natural size and appearance, and quite pervious. The left carotid and subclavian arteries were healthy. The vena cava superior was much compressed; the subclavian veins, pushed from their proper situation, were likewise flattened and partially obliterated, the collateral branches were considerably enlarged, &c. &c. The third and fourth dorsal vertebræ were carious or ulcerated at their surface, and covered by a fetid matter, which communicated with the interior of the lower and back part of the aneurysmal sac. Exactly in this situation the trachea was extensively diseased; its inner membrane was thick and dark-coloured, and presented on its surface a dirty-gray mucus, its follicles very prominent, &c. The œsophagus was here found ulcerated, and communicated with the fetid matter of the diseased vertebræ; the lungs were engorged; the other viscera presented no lesions worthy of our present notice.

Here then is another case exemplifying

the great difficulty of making a correct diagnosis of aneurysmal tumours when situated in the neck and superior part of the thorax, a subject which has particularly attracted our attention elsewhere.* In the present instance, however, we were fortunate in forming a right opinion with regard to the principal vessels, and in adopting a rational surgical operation. Nevertheless many morbid lesions escaped notice; the complication of diseases and the similarity of their symptoms, was the source of error. Was it not plausible to ascribe the pain in the back, the pain in the throat, the difficulty of deglutition, &c., to pressure of the tumour? Was it not reasonable to suppose the origin of the right carotid and subclavian arteries likewise affected, especially the carotid, whose pulsations were exceedingly feeble just above the tumour? I regret not having examined this vessel more minutely during life; the patient could not bear pressure on the neck, it even produced syncope when applied by M. Laugier. From the slight examination of this vessel, we merely thought it implicated in the disease, not obliterated. But the most valuable fact in this observation is undoubtedly the decrease of the aneurysmal sac, both the subclavian artery and its large branches being pervious and of natural size. This circumstance certainly tends most fully to establish the principle of the operation. May it not be considered most fortunate that the surgeon abstained from employing force (which many practise) in pulling the ligature away? for this course evidently might have caused a serious hemorrhagy, by withdrawing the plug of coagulum which closed the mouth of the artery, and filled the noose of the ligature.

Since the publication of Mr. Wardrop's book on Aneurysms and their Cure by the Brasdorian Operation, various opinions have been adopted, which I will briefly notice. The limits of this paper render it impossible to do justice to the numerous cases and memoirs written on the subject, although there is much more to blame than to commend. I must refer to the principal authorities.†

Besides the operations mentioned in Mr. Wardrop's work, it may be useful to

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* See Journal Hebdomadaire de Medecine, Paris. Sept. 26, 1829.

† The following works are the most worthy of being consulted:—

J. U. L. Casamayor's "Reflections et Observations Anat. Chirur. sur l'Aneurysme Spontané," &c. Paris, 1825. Brasdor's operation by Deschamps is here well described.

Hodgson and Breschet's "Maladies des Arteres"—English and French edition. These authors appear opposed to the method.

Chelin's "Handbuch der Chirurgie," b. 1, p. 869. This author supports the method, but without, perhaps, understanding its real principle. Heidelberg.

Rust's "Theoretisch and Praktisches Handbuch der Chirurgie." Berlin, 1830. B. ii. art. "Aneurysma." Nothing new, but some gross errors.

Omodei's "Giornale Universali di Medicina." Milano, 1829. A review of Mr. Wardrop's book, without any judgment or just criticism.

Samuel Cooper's "Dictionary" and Lectures, delivered at the Lond. University. *Med. Surg. Gazette*, Oct. 1833.

Mr. Lawrence's Lectures on Aneurysms.—"Med. Gaz.," vol. 6. In the same volume read Key's and Mott's Observations and Reflections.

Charles Bell's "Principles of Surgery," New edit. 1826. vol. 4. This author relates some interesting facts relative to obliteration of tumours following a diminution of the circulation; he is a strenuous partisan of the Brasdorian method; indeed he lays some claim to the discovery of the true principle "of our operations for aneurysms, the effect of which is only to diminish the impetus of the blood through the sac." p. 439. I am not aware that Sir C. Bell laid much stress upon this subject, until the publication of Mr. Wardrop's book.

Begin's "Dict. de Médecine Pratique," b. 2. Paris, 1829. Article "Aneurysme." A very bad composition.

Dupuytren's "Clinique Chirurg. de l'Hotel Dieu," b. 4. This work, composed by incompetent flatterers, proves the vanity and ignorance of the eminent surgeon, who does not yet understand the principle of the operation.

C. Tarral's "Reflections et Observations sur les Aneurysmes," and "Journal Hebdom. de Méd." Paris, 1829.

Berard (Prof.), "Memoire sur l'Etat des Arteres," and "Archives Générales de Méd." Paris, xxiii, 1830.

T. M. S. Villardebo's "Thesè sur la Methode de Brasdor. Soutenue à la Faculté de Paris." 1831.

J. Lisfranc's "These pour le Concours d'Une Chaire de Clinique Chirurgicale." Paris, 1834. This author is far from seeing the true principle of the operation; his thesis, besides being a mere compilation, contains on this subject some gross mistakes.

Marjolin and Berard's "Dict. de Méd."

cite the following, which are either unknown, or have attracted but little attention.

Sir E. Home was the second surgeon who followed this plan. In 1825 he tied the femoral artery for the cure of an aneurysmal tumour of the iliac vessel. The aneurysm, he says, increased after this operation, he therefore had recourse to another ingenious method, of which we will speak hereafter. Sir E. Home is too laconic in his description of the diseased vessel: it is not said precisely where the ligature was placed, or what was the state of the collateral branches, &c., and hence the difficulty of forming a judgment of the operation *

Mr. White has also tied the femoral artery below the profunda cruralis, which was given off high up; here the vessel on which the ligature was placed was quite obliterated. The patient died from erysipelas, and not from rupture of the sac, as Mr. J. G. Guthrie asserts: this observation is also very imperfectly reported.† It can hardly be considered a trial of the Brasdorian operation, on account of the vessel tied being already obliterated.

Mr. James, of Exeter, followed Sir E. Home's example of tying the femoral artery for iliac aneurysm. This operation did not ameliorate the patient's state; Mr. James, therefore, determined on trying the bold resource of taking up the abdominal aorta. The unfortunate result is fully known.‡

M. Dupuytren § has likewise given this operation his approval. For an aneurysmal tumour of the subclavian and innominata arteries, he placed a ligature around the axillary trunk. The cause of the patient's death would require too much examination to find a place in the present paper. I have elsewhere explained that the after-treatment was the principal, if not the sole, cause of the unfortunate result.

Mr. Aston Key ‖ has also tied the subclavian artery for the cure of aneurysm of the innominata. The patient, it will be recollected, died a very few hours after the operation, and without any evident cause.

Mr. John Scott, surgeon to the *London Hospital*, for a tumour which was supposed to have its seat in the arteria innominata, put a ligature around the right common carotid artery, which was shortly obliterated. The upper part of the tumour, some time after the operation, appeared to have somewhat diminished. At last, however, Mr. Scott proposed obliterating the subclavian artery, to which the patient would not consent and left the hospital. I am indebted to my friend Mr. Hamilton, demonstrator of anatomy, for having had the opportunity of seeing this poor fellow, who presented a prominent and frightful tumour of the neck, which for several days menaced rupture, which finally occurred, giving rise to a quickly fatal hemorrhage. We called to see this patient a few hours after his death, but his friends, all of the Jewish persuasion, would not (as usual) consent to our examining the body; it is, therefore, quite impossible to form any correct opinion of the operation.

The operations of Mr. Mott * and Mr. Montgomery, † so satisfactory as regards the principle of this method, are well known, and at present need no further comment.

These are all the operations with which I am acquainted, and here is the judgment which has been passed upon them. A young author, in whose erudition and scientific faith I place but little confidence, expresses in a pamphlet which is dedicated to the Lord Chancellor, and written for the "public and the profession," the following extraordinary opinion:—"Doubt appears to exist whether the operation of Brasdor has ever been successfully performed." (page 13.‡) He maintains with M. Begin, that Deschamp's operation was followed by rupture of the sac, which never occurred, for the sac was laid open by the knife, &c. But boldly to publish the following phrase, gives at once the measure of his great impartiality:—"In three or four cases he (Mr. Wardrop) has performed the operation, and, in one instance, he *believes* with success." Mr. Wardrop never made use of such an expression. Our author should read the works of those whom he pre-

New edit. T. 3. Article "Aneurysme." Paris, 1833. This article, like most others, is much better treated in this new dictionary than in any similar work published on the continent.

* "Philosophical Transactions." 1826, London.

† Mr. J. G. Guthrie's Op. cit., p. 8. Villardebo Op. cit. Paris, 1831.

‡ "Medico-Chirurg. Trans." vol. 16, 1829.

§ See "Memoire sur les Aneurysmes," Journal Hebdomad., Paris, 1829.

‖ "Lond. Medic. Gazette," vol. 6, page 703.

* "Lond. Med. Gazette," vol. 6, p. 61 or the "American Journal of the Medical Sciences," for February and August 1830.

† "Lancet," June 29, 1833; Dr. Johnson's "Journal," page 448. 1833.

‡ Phillips' (Benj.) "Series of Experiments on Arteries." Lond. 1832.

sumes to judge. Mr. J. G. Guthrie* on the other hand, does not deny the success of the Brasdorian operation, but explains it by the ligature producing inflammation and suppuration in the tumour. From this fact he argues also, that the operation is dangerous when performed on large vessels near the heart.

This exclusive theory, so at variance with the facts which science possesses, is the great characteristic feature of Mr. Guthrie's late Hunterian Oration at the Royal College of Surgeons in London. It would have been still more remarkable had Mr. Guthrie endeavoured to prove that the operation of the illustrious surgeon, whose memory he was perpetuating, was founded on a newly discovered principle! Has Mr. Guthrie never seen suppuration of aneurysmal sacs follow John Hunter's operation? Why not then attribute their cure to that cause? Having had the advantage of examining several morbid specimens which clearly show that coagulation and obliteration of a sac may take place without the assistance of suppuration, by means of a ligature applied either on the distal or the cardiac side of the aneurysm, I decidedly differ from a professor who maintains his *suppurative theory* by such slender reasonings! That suppuration of the sac may actually occur in certain cases, no one will attempt to deny, but these may be justly considered as exceptions to the general rule. Another opinion, of a much more plausible kind, requires brief notice, especially as it has for its advocates the names of Boyer, Dupuytren, Lisfranc, Velpeau, and Begin. These authorities assert that the Brasdorian operation presents little or no chance of success where collateral branches are given off between the tumour and the ligature; and hence most continental writers have divided these cases into two classes; in the one no branch exists between the ligature and the tumour; in the other, collateral vessels are given off; consequently, also, they admit the operation in the former division and reject it in the latter.† M. Lisfranc has committed a great mistake in placing M. Dupuytren's case in the second class, for I have elsewhere shown that the collateral arteries (the dissection performed by myself) were all entirely obliterated; therefore this circumstance evidently renders the case analogous to those of the first division. M. Laugier's case proves, clearly, that collateral branches, both large and numerous, between the ligature and the tumour, are not an obstacle to the cure. There are other facts, already known, which corroborate the same observation, but it is still unsettled what degree of circulation in the sac will prevent coagulation.

The danger of rupturing the sac by producing a sudden stoppage of the circulation, is an objection which merits but short notice, although much supported by writers. Sir A. Cooper's is the only case where this accident can possibly be attributed to the ligature, and even there it was exceedingly equivocal, some time having elapsed between the operation and the death of the patient; there was no post-mortem examination; besides, the ligature was placed on the femoral artery, below some collateral branches, &c.

The greatest difficulty pertaining to the Brasdorian method is, how to ascertain its comparative chances of success. Most authors have committed an extraordinary error in calculating the number of operations, and merely mentioning their result. Thus it is that the most illegitimate opinions are formed. For instance, is it not absurd that my learned friend M. Velpeau * should bring forth Mr. A. Key's operation as a new argument against the method? Here the patient died a few hours after the ligature of the right carotid artery was performed; the examination of the body displayed the singular coincidence of a partial occlusion of the left carotid artery. The brain too, scantily supplied with blood, was here, probably, the sole cause of death. Mr. Lambert's operation is also termed "fatal." Truly the patient died of hemorrhage, but the tumour was in a rapid stage of cure.

M. Laugier's operation, which certainly confirms all that can be said in favour of ligatures on the distal side of aneurysmal tumours, will soon, no doubt, enlarge the list of fatal cases! Mature reflection, however, will easily point out the fallacy of thus confounding all cases together, — of drawing conclusions so arbitrarily, — and will prove the necessity of taking into consideration each individual case, of weighing each peculiarity, &c. In judging of an operation, inquiry should first be made if the requisite conditions for its success were present; the various complications of disease which may either impede or prevent its effects, should also

* Mr. J. G. Guthrie on the Diseases and Injuries of Arteries with Oper., &c., Lond. 1830.

† See his "These pour le Concours de Clinique Chirurgicale à Paris," 1834. See Op. cit. "Journal Hebdomadaire," Paris, 1820.

* See "Médecine Operatoire," Ligature des Arteres.

claim minute attention. With regard to the present subject, whoever will carefully study the observations which are recorded, will find few where the operation had great chance of success; and this, not on account of the collateral circulation, but because the disease was either too far advanced, the tumour communicated too largely with the aorta, or the position of the sac was such as not to allow the ligature of the artery to have sufficient effect on the circulation. These conditions are of the utmost importance, and as a general rule it may be established, that the more freely the tumour communicates with the aorta,—the more the axis of the artery tied deviates from the centre of the tumour,—the less expectation of coagulation taking place should be entertained. For instance; in M. Dupuytren's and Mr. A. Key's cases, the tumour communicated so largely with the aorta, and the axis of the arteries tied corresponded so little with the axis of the sac, that the operation was almost hopeless. Assuredly the frequent and sometimes insurmountable difficulty of forming a correct diagnosis of aneurysmal tumours of the neck and abdomen, of appreciating the diseased state of the aorta, the form of the tumour, the direction of the arteries arising therefrom, the complications of disease of the surrounding and deep-seated parts, &c. &c., tend much to perplex the surgeon, and render his conduct most difficult.

After carefully considering all these facts, the following conclusion appears to be the most correct,—

1. That the Brasdorian method (similar in principle to the Hunterian) having been completely successful in obliterating tumours by coagulating their blood; its principle is fairly and indisputably established.

2. That collateral arteries, provided they are neither too numerous nor too large, are not an impediment to its success; nevertheless, as we are yet uncertain how far the force of the circulation must be diminished, prudence dictates that we should, where it can conveniently be done, place the ligature on their cardiac side.*

3. That rupture of the sac need not be dreaded. But,

4. And lastly, as the Brasdorian operation requires the existence of many anatomical peculiarities, which, unfortunately, are here rarely met with, it is, for this reason, seldom doomed to succeed; and hence the importance of prosecuting experiments on the tumours themselves, a plan already adopted by Sir E. Home in 1826,† and long ago hinted at by that modest, erudite, and conscientious surgeon, J. B. Monteggia, of Milan.‡

Paris, March, 1835.

* Might not compression applied to the tumour after the operation of ligature, considerably facilitate its object,—coagulation?

† "Philosophical Transactions" for 1825, on the Coagulation by Heat of the Fluid Blood in a Tumour, &c.

‡ J. B. Monteggia, "Istituzioni Chirurgiche," vol. I, p. 259, nuova edizione. Milano, 1829.

CORRESPONDENCE WITH THE

POOR-LAW COMMISSIONERS,

Relative to an Order against the Official Medical Attendance of Licentiates of the Apothecaries' Company on Pauper Patients.

To the Poor-Law Commissioners, Somerset House, London.

GENTLEMEN,—At a meeting holden yesterday in the poor-house of Faringdon, of the guardians of the parish of Faringdon, and of the twenty-nine parishes which, under the authority of the Poor-Law Amendment Act, have recently been united with [illegible] assistant-commissioner, Mr. Gulson, decided that no medical practitioner, not being a member of the College of Surgeons, should be permitted to contract, or be considered eligible to contract, for attendance on the poor in any of the united parishes of which this place is the centre.

Your assistant-commissioner further stated, that the same rule would be invariably acted upon throughout all the parishes in England and Wales.

As a licentiate of the Apothecaries Company, and as a medical practitioner in this place of nearly nine years' standing, and who has been the parish surgeon and apothecary, not only of Faringdon, but also of several of the adjoining parishes, I enter my protest against this most extraordinary, impracticable, and unjust decision.

1. Extraordinary—because, in making it, the assistant-commissioner has exercised powers which have hitherto only belonged to, and been exercised by, the three estates of the realm, inasmuch as, upon his own responsibility, he has actually given a decision which, if persisted in, will have all the effect of an *ex post-facto* law, and will virtually repeal that part of the Apothecaries Act which pronounces

a licentiate of the Company duly qualified to practise.

2. Impracticable—because the power thus taken out of the hands of the Legislature, and usurped by one of the assistant commissioners of the Poor-Law Amendment Act, will, if acted upon, disqualify seven out of every ten country practitioners in the kingdom. In an adjoining town, for instance, this *lex absurda* will disqualify a medical man of extensive practice, and of thirty years' standing; and in a neighbouring city it will disqualify an infirmary surgeon, whose professional skill has never before been questioned. It would seem also to contradict the spirit of the Poor-Law Amendment Act itself, which, in the latter part of the forty-third clause, enacts, "that where no rules, orders, regulations, or by-laws, shall have been directed by the commissioners to be enforced and observed in the workhouse of any parish, nothing in this Act shall be construed to restrain or prevent any *physician, surgeon*, or *apothecary*, from visiting such workhouse, and examining and certifying the state and condition of the same, and of *the poor therein*." Thus it would appear that whilst the Act declares any *physician*, surgeon, or *apothecary*, competent to examine into the state of the poor, the assistant commissioner declares that neither *physicians* nor *apothecaries* are competent to prescribe for them.

This *lex absurda* would also exclude from parochially-paid attendance on the poor every Fellow and Licentiate of the College of Physicians in the United Kingdom, none of whom are permitted, by the regulations of the College of Physicians, to be members of the College of Surgeons, and, consequently, none of whom, according to the dictum of the assistant-commissioner, would be permitted to contract, or be considered eligible to contract, for attendance on the poor. Such a rule will be defeated by its own absurdity. Are you aware, Gentlemen, that a licentiate of the Apothecaries' Company, although not a member of the College of Surgeons, is *legally* qualified to practise, and can recover for medicines and attendance in a court of law, whereas the legal qualification of a member of the College of Surgeons, he not being a licentiate of the Apothecaries' Company, extends only to one branch—viz. surgery, and does not enable him to recover any charge made by him for medicines or medical attendance? Are you further aware that the Apothecaries' Company require that every candidate for examination shall exhibit his indenture, and certificates of having attended two courses of lectures on anatomy and physiology, and two courses of anatomical demonstrations, of the same extent as required by the Royal College of Surgeons in London.*

3. Unjust—because it casts a most undeserved slur upon, and will most seriously injure, a body of men who are not a whit behind their professional brethren who chance to be members of the College, either in experience, professional skill, or humanity to the poor.

As an apprentice I resided with a surgeon in very extensive practice in London (who still lives to be an ornament to his profession), and during the last three years of my apprenticeship, I, upon the average, saw and prescribed for from fifteen to twenty patients daily. As an assistant I lived with him afterwards. As a licentiate of the Apothecaries' Company, I have practised the three branches of the profession in this town for nearly nine years.

Having served a regular apprenticeship, and having passed (I hope I may say with some credit to myself) the examination required by the Legislature, I had hitherto considered myself on a perfect equality with any member of the College. Now, however, I find, by the mere ipse-dixit of an Assistant-Commissioner, an Act of Parliament is to all intents and purposes repealed, and I am stigmatized as incompetent, and shut out from becoming a candidate, for the office of surgical and medical attendant on the poor of the united parishes.

I have carefully looked over the "powers" delegated to the Assistant-Commissioners, and as, amongst those "powers," I do not see any "power" to repeal an existing Act of Parliament, or to enact an Act of an Assistant-Commissioner in its stead, I venture, with all respect, to submit my case to you,—not on my own behalf alone, but also on behalf of the vast number of licentiates throughout the kingdom, who are similarly situated to myself.

As the election is fixed to take place within thirteen days from the date of my letter, permit me add, that I shall consider myself both obliged and served by being favoured with a reply at your earliest convenience. I have the honour to be, Gentlemen, your obedient humble servant,

JOHN HALL BARNETT.

Faringdon, Berks, March 11, 1835.

To John Hall Barnett, Esq., Apothecary, Faringdon.

Sir,—The Poor-Law Commissioners for England and Wales have received your letter of the 11th instant, and have by this

* See Regulations by the Apothecaries' Company, Sept. 1832.

night's post written to their Assistant-Commissioner on the subject to which you advert. The Board will pay all fitting attention to your representation, and have no wish to exclude individuals duly licensed either by the College of Surgeons, or the Apothecaries' Company.

(By order of the Board),

E. CHADWICK, Sec.

Poor-Law Commission-Office,
Somerset House,
March 12th, 1835.

To Mr. John Hall Barnett, Surgeon, &c., Faringdon.

Sir,—I have to inform you, with reference to the application made by you as to the construction of the words "duly licensed" in the rules &c. for the Faringdon Union, that the Board of Poor-Law Commissioners have decided the words to mean "licensed *either* by the College of Surgeons *or* the Apothecaries' Company," and you are, therefore, at liberty to tender for any division or subdivision of the Union. As I cannot be supposed to know either medical law or medical rules, I placed that construction upon the words I considered right, and if any misconstruction has taken place, I have merely to say I shall set it right. I have, therefore, written to the Chairman, Lord Harrington, to the above effect. I am, Sir, yours, &c.,

EDWARD GULSON.

Reading, March 13, 1835.

To the Poor-Law Commissioners, London.

Gentlemen,—I beg to thank you for your satisfactory and very prompt reply to my letter. By this morning's post I have also received a letter from Mr. Gulson, by which it appears that the construction which he put upon the words "duly licensed" was his own construction, and not, as he stated at the meeting of the Board of Guardians, the construction of the Board of Poor-Law Commissioners. I have the honour to be, Gentlemen, with great respect, your obedient humble servant,

JOHN HALL BARNETT.

Faringdon, Berks, March 15, 1835.

To Edward Gulson, Esq.

Sir,—I have received your letter of the 13th instant, by which it appears that the construction you put upon the words "duly licensed" was your own construction, and not the construction of the Board of Poor-Law Commissioners, as you then stated. I beg to add that I fully concur in the opinion expressed in your letter, that you "cannot be supposed to know either medical law or medical rules." I have the honour to be, Sir, your obedient humble servant,

JOHN HALL BARNETT.

Faringdon, Berks, March 15, 1835.

*** The powers conferred on the Poor-Law Commissioners are literally frightful. In removing the objection of which Mr. BARNETT complains, that gentleman may imagine, possibly, that the Commissioners have rendered justice to medical practitioners generally throughout England and Wales, but they will soon hear to the contrary from those practitioners who belong neither to the College of Surgeons in London nor to the Apothecaries' Company in Bridge Street. Mr. FRANKLAND LEWIS, the Chief Commissioner was stuck on the Medical Committee of the House of Commons, at the suggestion or recommendation of the immaculate Council in Lincoln's-Inn-Fields. Mr. FRANKLAND LEWIS, it seems, is a man who *does not forget his friends*, but it would be wise in him to refrain from indulging his feelings of partiality for a gang of monopolists and corruptionists, at the expense of justice and humanity.

THE LANCET.

London, Saturday, March 21, 1835.

THE communications are very numerous which we have received respecting the "Brenchley case," and the circumstances connected with that transaction have opened a new source of investigation, in which many of our professiona brethren appear to take a very deep interest. The question has been twenty times proposed, "To what extent, or under "what circumstances, is a surgeon justi-"fied in compelling a patient to submit "to an operation?"

This interrogatory involves many nice and delicate considerations, because we are without the aid of any statute law whereby to govern our decision, and even the cases at common law are by no means applicable to a thousandth part of the circumstances which may be presented to our view in weighing the importance and applicability of all the conditions which accidents, insanity, and the many ills that flesh is heir to, readily obtrude on the mind in reflecting on the question. Of the Brenchley case, itself, we shall say nothing, because we do not yet know whether the cause has been tried, or whether it has been dismissed, at the assizes. The first point of inquiry, then, which this subject presents to our notice is this,—*Are there any circumstances which would justify a surgeon in compelling a patient who is above the age of infancy, and of sane mind, to submit to an operation in surgery?*

That the reply must be in the affirmative will be instantly admitted, and the occurrences of almost every week in the great hospitals of this kingdom, furnish ample testimony of the loss of life which would ensue if medical officers had not sufficient vigour of mind to apply their skill in cases of accident, in direct opposition to the entreaties of their patients. Unless, however, the circumstances are most threatening,—unless delay would be attended with speedy (almost instantaneous) peril, no forcible interference on the part of the operator would be justified either by law or by reason. But, for example, in accidents which are accompanied by wounds of large blood-vessels, is the surgeon to stand by and quietly gaze on while the current of life is fast ebbing, simply because the fears of the patient induce him to intreat that no operation should be performed? A single case is a sufficient illustration of the propriety of surgical interference under circumstances of pressing emergency, and it is evident that such cases might be multiplied *ad infinitum*.

On such occasions, however, it must be remembered that the professional aid of the surgeon has been regularly and properly solicited, and that thus his attendance has thrown upon him the responsibility of the treatment to which the patient is subjected. But if the accident be a fracture, or a dislocation, and the mind of the patient is entirely unimpaired, it may be a question (and it is one which we feel ourselves quite incapable of determining) whether a jury would justify a surgeon in opposing the will of the patient, by *forcing* him to submit to the means which are necessary to restore to its right position the injured or displaced limb; but if the patient were, in the first instance, to give his consent to the application of splints and bandages for the cure of the fracture, or the application of pulleys for the relief of the dislocation, we believe that the surgeon, having commenced his curative procedure with the consent of the patient, would be held to be warranted in persisting, for a reasonable time, in the attempt to accomplish his object. Thus, it often happens in dislocations at the hip joint, that patients, soon after the process of extension has commenced, beseech the operator to discontinue his efforts; but such entreaties, although not unfeelingly disregarded, do not induce the operator to desist from his exertions; and no sooner is the object of the surgeon accomplished, no sooner is the dislocated bone reduced, than the grateful patient exclaims, "How "thankful I am, sir, that you did not stop "when I cried out!" These are simple, straight-forward cases, which present but few difficulties to the minds of persons who understand what are the duties of medical practitioners, and what are the responsibilities which are consequent on a failure of executing them.

In the treatment to which infants and insane persons may be subjected, only one rule is applicable, because all such parties being in a condition which renders them incapable of exercising a sound judgment as to what can or what cannot be done for their benefit, both the common and the statute law of our country have made relations, and, in some instances, other persons, officers appointed, under Government, their legal protectors and guardians. A child, then, under the sanction of its parent, might be legally compelled to submit to an operation, the performance of which would, confessedly, be beneficial to its happiness and health; and, in like manner, the legal guardian of a lunatic, having the sanction of relations of the afflicted party, where they are known to exist, might authorize a precisely similar line of conduct with respect to the individuals placed under his charge; still, in both cases, the surgeon would be held to be strictly responsible, not only for rendering his patient the subject of an operation, but, also, for the manner in which the operation is executed, should he undertake its performance.

In all these cases the duty of the surgeon, and what the operator owes to the law, to justice, and to humanity, is manifestly clear. If he be a man of competent skill, the obligations which are imposed on him by no means press heavily, either in a professional or in a moral sense; but if we go a step farther, and find him wandering in any degree from the path which is marked out by honour and medical etiquette, then, indeed, he is discovered in a position which is far from enviable, and whence he cannot escape without carrying with him the taint of professional disgrace. It is acknowledged, necessarily acknowledged, by every medical author of authority, that the first object of the practitioner in medicine should be the relief of his patient from suffering,—in a word, the mitigation or cure of the disease. But are there not instances, and numerous ones too, in which the main object, the all-inciting object, of the operator, is to obtain benefit for himself by establishing or extending his celebrity as a man of operative dexterity? Thus, it has but too often happened that the surgeons of some of our public institutions have resorted to trick and manœuvre for the purpose of getting within their reach individuals on whom they might perform some of the "great" operations of surgery. Instances have occurred in which persons have been bribed to render their assistance towards bringing a patient within the reach of the surgeon's knife. In cases of this kind the operator incurs a very awful responsibility; and, certainly, in conjunction with his agents, might render himself liable to the consequences of a conviction for conspiracy. Apart from some of our institutions, where operations are considered the ALL-IN-ALL of surgery, we believe that such instances of professional intrigue and dishonour are rare: but let them occur when and where they may, it is impossible that such acts can be too severely reprehended. The consent of the patient in cases of this kind, although it would obviously tend to lessen, would not, and could not, wholly abstract from the culpability of the practitioner; for that consent would only be one of the first effects of the intrigue of which the operator had himself been the author; and the law does not hold it to be just that a person should derive benefit from his own wrongdoing, whether it contribute the first or the last step in a proceeding which is wholly characterized by under-hand dealing.

From this view of the question, we hope that young practitioners will not be induced, by any desire to establish a reputation for operative skill, to hunt out objects on whom to exercise their manual dexterity. By so doing they will at once

perceive that a most heavy responsibility is incurred; and should detection be one of the results of their selfishness and ambition, it would assuredly be followed by disgrace and ruin.

Mr. Dermott has addressed a brief letter to us,—which, however, brief as it is, we refrain from inserting, because, in the first place, we have so many others on the same subject that we cannot find room for them all; and, in the second place, because we wish to reserve the information they may contain for use on another occasion,—in which letter, after some very just remarks on the Dispensary system, with reference to the appeal in the first leader of our Number of last week, Mr. Dermott indignantly asks,—

"Is there a single case where there is not intrigue exercised, more or less, in the election of medical officers? Is it not heart-sickening to witness, as I have done, in some institutions, the sick applying for relief which is withheld because they have not been able to obtain a letter of recommendation, whilst the names of keepers of common brothels are on the lists of subscribers, merely that they may be enabled to send their prostituted and diseased victims for relief,—those very persons, too, being subscribers to whom a medical candidate for a vacant office in the institution has sometimes to appeal to insure his success?"

Mr. Dermott then immediately observes,—and we confess that the remark, coming from a man of uncompromising and determined spirit, excited our surprise,—

"These facts, regarding the general mode in which things are conducted, being as clear as the sun at noon-day, so universally present themselves, are so generally known, that we should not dwell too much upon individual instances, nor should we attack mere individuals, but principles."

Wholly differing from the opinion entertained by Mr. Dermott, because, from long experience, we know that the evils which are here termed "principles," can be successfully removed only by attacking and exposing "individual instances" of abuse,—the sources whence the evils spring; knowing, also, that the power to convince others of the error of existing systems is possessed only by those who found their arguments upon, and illustrate them by, instances of corrupt conduct; we especially beg Mr. Dermott, and all other of our readers, to supply us with every individual instance of abuse which has fallen, or may fall, under their notice, intreating them not for one moment to imagine that the "facts regarding the general mode in which corrupt proceedings are managed," are as "clear as noon day," and "universally known." Medical abuses, notorious as they may be in the profession, are but ill understood out of it. Their enormity, in fact, almost prevents them from obtaining a place in the belief of those who have not personally witnessed them. The very passage quoted from the letter of Mr. Dermott would startle nine-tenths of a general auditory: and we leave it to Mr. Dermott to estimate the feelings of that auditory if, on being told, when demanding proof of the disgusting statement, that the alleger was not prepared to support his allegation by reference to a single "individual instance."

We intended to say a few words in this place on the subject of the paper of Mr. Tarral, inserted at page 889 of our present Number, but being much pressed for room this week, we defer our purpose until the publication of the next Lancet.

M. Lobstein, clinical professor at the Faculty of Strasburg, has just died from an affection of the bladder. This is the second professor which the school of Strasbourg has lost within a short time. It is not more than three weeks since M. Fordere, author of one of the first works on medical jurisprudence, died in the same city.

INTERCEPTED LETTERS.

["REFORM."]

"DEAR DR. MACMICHAEL,—Our matters are now in such a state that we cannot expect to gain any further delays unless we exert ourselves. Weighing deeply and maturely all our interests, therefore, and having a proper consideration and attention for the delicate feelings of the Fellows, I am confident that it will now be better to make some kind of overtures to the Licentiates, which, though they may not accept them, will have the appearance of a wish to be liberal, and thus gain us time. To pursue this course successfully will require great caution. We must not commit ourselves in any way; all must be done *sub rosa*, and by some more crafty and cunning fellow than either you or I. To *me*, character is every thing, and the high position I have been placed in by my professional brethren, and the exalted estimation I enjoy in public opinion, I owe not so much to my classical and scientific acquirements as to my straight-forward, upright, and unbending disposition.

"To me it is quite clear that the present Government will not be driven from the helm so soon as the Reformers anticipate, and that we shall have it all our own way for some time longer. The intimate and confidential intercourse I enjoy with the Premier has enabled me to give him a candid and just view of all our College concerns, and I feel confident that the severe blow which my esteemed and right honourable friend got for his barefaced apostacy on the Catholic Bill, will now make him determined and headstrong against any thing like substantial reform, as the only mode left him of restoring his public character, and securing him from that infamy which would be attached to a public man, were he now, at the eleventh hour, to pull to pieces the venerable and ancient institutions which it has ever been his professed policy to uphold. Our College meeting, as well as the luxurious banquet which I gave him in Curzon-street, has, I have reason to know, made a strong impression on him, and he confesses that he had no idea how such an *omnium gatherum* could have been effected. You cannot have a better example, my dear friend, for conducting our College affairs than that of the noble Premier. Observe with what caution and circumspection he makes *promises*, and, like mine, his promises are all *conditional*. You must also follow his example in saying and doing nothing that can bear the interpretation of being hypocritical or jesuitical.

"It has appeared to me that it would be well if you could get, without loss of time, *hints* thrown out to any of the most grumbling and officious of the Licentiates, that the College is desirous of pursuing a liberal system of admission to the Fellowship, and I think that if you could manage to bring over a few of the *ringleaders*, we should have no trouble with the rest.

"I regret that there is such a dearth of papers for reading at our College meetings, and that the meetings should have been so ill attended of late. I have again applied to the Dean of Westminster, to whom we have already been indebted for no less than two admirable compositions on the great plague of Egypt; but he seems inclined to be plagued to write no more for us. I understand that *Dedication* HOPE (as Sir ASTLEY calls him) has expressed a great ambition to have a paper of his read, and though I have no objection to receive one from a Licentiate, yet HOPE is a forward youth, and must be kept in his proper place. That dedication of his did the St. George's people no good, and Sir BENJAMIN must have had a large gullet, and a strong digestion, when he swallowed it. No men have ever appeared to me more contemptible than those who pour out flattery, and those who put the cup to their lips and drink it.

"I have just learned that the London University is to make another attempt to get a charter and grant degrees. Like all liberals they want to become monopolists: but I shall put a spoke in their wheel when they get the length of Downing-street.

"Let me know all you do, and believe me your sincere friend and well-wisher,

"H. H.

"Curzon-street, March."

["REFORM"]

"DEAR SIR GEORGE TUTHILL,—After repeated confidential conversations with Sir ROBERT PEEL, the DUKE of WELLINGTON, Mr. GOULBURN, the LORD CHANCELLOR, the ARCHBISHOP of CANTERBURY, the LORD PRIMATE of IRELAND, and several other of the Irish Church dignitaries, I think I shall be able to lay before the College such a plan of reform as cannot fail to obtain the concurrence and approbation of all the Fellows. There may be a few amongst them who, under the cloak of liberalism, will cite objections, and talk of difficulties, but I consider all these as our most steady supporters, because while they profess to advocate liberal principles, they are the last to counte-

nance any one measure which would interfere with their own personal ambition, or shake one pillar of the venerable old College in Pall Mall East. These plans, my dear friend, I wish you to talk over soberly, and in good earnest, with the most respectable and influential of the Fellows, and I have selected you to execute this most important function, not only in consequence of the profound knowledge you possess of the human mind, in health as well as in a state of aberration, but for your singular piety, and your devotion to the interests of the College.

"I propose, in the first place, that the Licentiates shall be selected, not by the voice of the whole College, but by twenty-one Fellows, which measure will enable us to retain the patronage in our own hands, special care being taken that the twenty-one are of our own ways of thinking; and though one might talk very big of the *liberal* manner in which Licentiates shall be elected to the fellowship, yet our *promises* need only be *conditional*, so that a great number of the Licentiates will become *expectants*, and live in hope!

"My next scheme is to increase the *funds* of the College - the sinews of power —which, I understand from the treasurer, are in a very low state. I propose, therefore, to take advantage of our charter, and grant licenses to general practitioners, the price of such license to be determined on by our finance committee. For the same laudable purpose I propose to grant licenses to practise surgery, and thus we shall be able to convert ourselves into a *central board* or faculty, which will not only govern the whole profession, but will secure a large proportion of those immense sums of money which have been levied on the medical public by the Council of Lincoln's-Inn Fields, and the gentlemen of Apothecaries' Hall. This measure I am well aware will be most unpalatable to those corporate bodies; but it is full time that they should be both ground down to their proper levels. I need not warn you all of the daily inroads which they have long been making on our public funds, and of their successful monopoly of private practice; it is now time we should manfully come forward, and, hand-in-hand, co-operate in crushing them, and rescuing our prescribed rights and legitimate property. I have desired MACMICHAEL to *probe* the Licentiates, and express to them how sincerely it is our wish to correct all *acknowledged* abuses; but, at the same time that he promises liberally, he is not to *commit himself*. Above all things he is always to *converse* on the subject, and never to *write*. It is easy to forget what passes in a conversation, but what is *written down* may be brought forward as an incontrovertible document.

"You will see the propriety of not hurrying in this business, as it is a great object for us to gain time, though we should never fail to appear in earnest. One cause of delay I would fairly state to be the propriety of getting all our new regulations written in *Latin*, and as I have not myself leisure to do this, and as no one else is capable of it but Dr. BADHAM, the papers must be sent to Glasgow, which will enable a good deal of time to be consumed. Believe me, dear Sir GEORGE,

"Your sincere friend, H. H.

"London, March 4, 1835."

["REFORM."]

"DEAR SIR HENRY,—I at once applied to our friends at *St. George's*, thinking there were none other so likely to fulfil your intentions towards the licentiates, Dr. SEYMOUR, as you well know, being able to discharge on all occasions an abundance of words to which no distinct meaning can be attached. He has busied himself in the matter, but, I regret to say, most unsuccessfully. It is clear that the Licentiates have organized themselves, and offer a decided resistance to anything like a *compromise*. There are, perhaps, a few of their number who would do anything for their own interests, but these are only the lowest and most disreputable of the class, such as Aberdeen doctors and man-midwives,—some of the dross that will do no good to our College. I think it right you should know that they suspect the sincerity of your promises, and that you might evade having made them by declaring they were merely *conditional*. I am much surprised at this; but, still, as they cannot help seeing that we wish to keep up, so far as possible, the line of distinction between the fellows and licentiates, it is natural that they should expect that, so far as our interests are concerned, as few licentiates as possible should be admitted. Whilst we feel confident that, by your confidential intercourse with Sir ROBERT changes of any consequence will never be permitted, the licentiates have a strong impression that the present Government cannot remain long in office; and that the liberal party which must succeed them will level us all. Heaven grant that their hopes may be disappointed, though I, like yourself, cannot help having my fears!

"Your most faithful,

"M M."

DIAGNOSIS BY THE TONGUE.

SIR,—I am gratified to find by a letter from Mr. Bush, of Frome, that the appearance of the tongue, as indicative of certain diseased states of the system, is beginning to attract particular attention. The appearance of the tongue will as often correctly indicate the appropriate constitutional treatment of disease, as the appearance of a granulating surface will mark the appropriate local treatment of an ulcer, whether by stimulating, astringent, or sedative remedies. I have frequently noticed the "serrated edge" of the tongue (it is very common to insane invalids returned from India), but I consider such an appearance as less an indication of engorgement of the liver than of depression of the nervous system. The tongue takes an impression from the teeth, not, in general, because it is enlarged, but because it has lost its muscular resiliency, and retains an indentation like a piece of dough. We find it, at the same time, generally pallid, as in a chlorotic or anæmatous subject. When the tongue is thus pale and indented by the teeth, it will be discovered that the whole muscular system is much enfeebled, and the mind depressed, and that all the functions of the body are languidly performed. The liver more obviously participates in the general torpor of the system, because certain symptoms of an inactive state of the liver are more clearly recognised, but it is often most fatal error to treat the effect of a general torpor and debility of the nervous system (an inactive state of the liver) as a specific hepatic disease. Mercury, while it stimulates the liver, often exhausts the brain, and by diminishing power adds to the general disease. A debilitated subject will frequently detect the administration of the smallest dose of mercury by the almost insupportable languor it produces. When the tongue takes an impression from the teeth, when it is pallid and apparently bloodless, I should recommend that mercury be only given at distant periods, and only then if the tongue continue obstinately coated. Aloes, colocynth, senna-tea, and minute doses of tartarized antimony, are the best substitutes for mercury, as, like mercury, they act especially upon the liver, but do not, like mercury, particularly debilitate the nervous system. *Small* doses of magnesiæ sulphas, with sulphate of quinine, and especially iron, (in the form of tinct. ferri muriat. or f. sulphat.) are the most eligible tonics. Systematic diet and regulated exercise are, however, almost indispensable to recovery. HENRY REES.

45, Finsbury-square, March 16, 1835.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THIS learned body having for some years past been acquiring the character of a subscription library rather than that of a scientific society, its managers, in order to increase the number of its subscribers, obtained a royal charter, in consequence of the security which a charter gives to a joint-stock company. As soon, however, as the society obtained this mark of royal favour, it became and it has since continued to be, the seat of internal discord and intrigue. On the approach of the annual election of new officers, the name of Mr. EARLE being next in rotation as President, it was proposed by some of the menials of the society that Mr. EARLE should be passed over, and that the eminent Sir BENJAMIN BRODIE should be elected in his place, the parties anticipating not only that a change which would tend to adorn the chair with a *title* would be highly desirable, but that the same distinguished talents for jobbing which have lately been so successfully displayed at *St. George's Hospital* would secure for the society's library, apartments in Somerset House.

Previous, however, to the consummation of this scheme, information of it by a side-wind reached the ears of Mr. EARLE, who, with a spirit becoming his surgical celebrity, instantly sent in his resignation. The council now met and deliberated, and finding that their private proceedings had come to light, they prevailed on the flexible baronet to withdraw, when Mr. EARLE was with little difficulty induced to rejoin the society and accept the chair.

An address to the following effect has been forwarded to us in the pages of the *Liverpool Journal* of March 14th, containing an appeal to the public in Liverpool, drawn up by Dr. Jeffreys, one of the gentlemen who have undertaken to conduct the preliminary business of the new medical institution in that town:—

To the Inhabitants of Liverpool.

The medical profession of Liverpool having had repeated meetings relative to the necessity of possessing a building expressly adapted to hold their present library and an Anatomical (Pathological) Museum, and to contain a theatre of assembly for various purposes, have come to the resolution of endeavouring to raise the sum of 1500*l.* or 2000*l.* for the undertaking; and in this attempt they are

favoured by a grant from the Corporation of a suitable piece of land, in Duke-street, for the necessary erection. They appeal, first of all, to their medical brethren in aid of such contributions as the object demands. As, however, the pecuniary resources of the medical profession, with some accidental exceptions, are often limited, they are compelled (doing so with diffidence) to extend their appeal to the more wealthy part of this great and growing community, fully convinced that the project requires only to be sufficiently known to be duly appreciated—as it has for its object, not only the improvement of the medical profession, but the undoubted benefit of their fellow-townsmen. The establishment also will give additional importance to Liverpool, where such advances are not only necessary, but are loudly called for, both to heighten the standing of the medical profession, and to keep pace with the present gigantic strides of every species of scientific attainment. The anxiety of the medical profession to advance their object has not only been created, but is also kept alive, by feelings unalloyed by any selfish views which they, as individuals, can promote by its accomplishment, either directly or indirectly. It is solely and expressly designed to place and preserve the profession in Liverpool upon a footing calculated to secure their respectability, and their utility as members of society who are anxious to deserve the public confidence, and to hand down to posterity a lasting memorial of their belief in the utility of a project which is universal in the benevolence of its designs.

An accurate plan and elevation of the building are in the possession of Dr. Rutter, who will show them to any gentleman who may wish to see them.

THE anniversary dinner of the Aldersgate Medical School will take place on Saturday on Saturday, April 11th, at the Albion Tavern, Aldersgate-street, Mr. Skey in the chair.

A CORRESPONDENT who has authenticated his letter, complains to us that a physician who resides in the neighbourhood of Blackfriars Bridge is in the habit of penning his prescriptions in such characters and with such abbreviations as will render them intelligible only to a particular druggist who resides in Blackfriars-road, and he has forwarded to us a bit of scribbled writing-paper in proof of the justice of his complaint, and as a specimen of the doctor's prescriptions. The practice objected to is a highly improper one, and as the communication between the prescriber and the compounder in the present instance is very unprofessionally hieroglyphic we here insert a copy of the document:—

"℞ M. feb. ʒiss, ½ bis die;
Hyd. Cr. gr. ij, os,
14 Feb. M. Purcell."

The writer of the letter headed "Tooth-Drawing at the North London Hospital" has neither privately authenticated his letter nor dated it, nor stated on what day the transaction occurred. If he will supply these essentials, and we hope he will, his statements shall be immediately published.

A great many correspondents trust, "now that the *Cyclopædia of Practical* Medicine is completed, that no farther postponement will take place in the publication of the remaining parts of Dr. Copland's *Dictionary of Medicine*,—the reply hitherto made at the publishing houses being, that the completion of the latter work has been deferred to prevent pilfering,"—a cause which Dr. C. it is said, has himself also urged in extenuation of the delay.

Mr. Hird would have no chance of obtaining his object in London while he is residing in Dublin. In some few instances the situation may not be difficult to be procured, but in the majority, without the influence of friends, and a personal acquaintance with the candidate or applicant, it would be vain to expect success.

A Subscriber (Liverpool) cannot do better than purchase Dr. O'Shaughnessy's translation of Lugol.

Vindex.—Little doubt can be entertained that the Act will be retrospective, and legally qualify the parties named, to practise as apothecaries.

A correspondent informs us that he has succeeded in two cases in curing rheumatism with sulphur, prescribed after the manner lately recommended in our pages by Mr. Tucker of Kennington.

A press of matter has compelled us to omit this week the letter of *Mr. Laming.*

Mr. H. Maddox.—Yes. He had better apply to some respectable practitioner in his neighbourhood.

Students.—Attendance on "Clinical Medicine" is presumed to be consequent on attendance at the hospital

We have not room this week for the statements relative to the Marylebone Infirmary.

The papers of *Sir James Murray* and *Mr. Robins* have reached us.

Mr. D.—We shall be glad of the information, on paper, relative to the lunatic asylums.

A report of the Grand Veterinary Dinner given to Mr. Coleman will probably appear next week.